CANDIDATE MANUAL

American Board of Dental Examiners (ADEX)

ADEX

Dental Examination

Curriculum Integrated Format
Class of 2013

Approved by
American Board of Dental Examiners, Inc.

Administered by
Nevada State Board of Dental Examiners

AND

North East Regional Board of Dental Examiners, Inc.

1304 Concourse Drive, Suite 100
Linthicum, MD 21090
www.nerb.org

Please read this manual in detail prior to attending the examination and bring it with you to the orientation and examination. It should also be retained for future reference.

ATTENTION DENTAL CANDIDATES

NERB administers the ADEX Dental Examination Series on behalf of a number of state dental boards and in accordance with state licensing requirements. This examination should be valid in any state accepting the ADEX Dental Examination. However, to be certain, candidates should check with the state dental board of any state in which they wish to be licensed to determine whether this examination will qualify them for licensure in that state.

For information about examination sites, dates and fees, visit the NERB website: www.nerb.org. The examination sites and dates will be found under the *Examination Calendar* drop-down list and the fees under the *Exam Info* drop-down list.

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Introduction

About the ADEX Dental Examination Series – 2013

The ADEX Dental Examination Series is the examination approved by the American Board of Dental Examiners, Inc. (ADEX) and administered by the North East Regional Board of Dental Examiners, Inc. (NERB). The ADEX Examination Series consists of computer simulations and clinical examinations performed on patients and manikins. The ADEX Examination Series is utilized to assist licensing jurisdictions in making decisions concerning the licensure of dentists. The ADEX Dental Examination Series for 2013 consists of up to five individual, skill-specific clinical examinations:

- Three simulated clinical examinations
  - Computer-based Diagnostic Skills Examination (DSE) Section
  - Endodontic Clinical Examination Section (manikin-based)
  - Fixed Prosthodontic Clinical Examination Section (manikin-based)
- Two clinical examinations performed on patients
  - Restorative Clinical Examination Section
  - Periodontal Clinical Examination Section (optional, based on the requirements in the state where the candidate seeks licensure)

Candidates taking this examination do so voluntarily and agree to accept the provisions and to follow the rules established by ADEX and NERB for the examination as detailed in this manual.

Purpose of the Examination Series

This Candidate Manual has been designed to assist in candidate's preparation for and participation in this examination series. The purpose of the ADEX Examination Series is to provide state dental boards with a uniform, accurate, third party assessment of the clinical skills of candidates who are applying for dental licensure and to identify areas of deficiency or weakness within skill sets so that candidates and dental schools can accomplish remediation. The examination series is based on specific performance criteria used to measure clinical competence.

About the American Board of Dental Examiners, Inc. (ADEX)

The American Board of Dental Examiners, Inc. (ADEX) is a private not-for-profit consortium of state and regional dental boards throughout the United States and its territories. ADEX provides for the ongoing development of a series of common, national dental licensing examinations that are uniformly administered by individual state or regional testing agencies on behalf of their participating and recognizing licensing jurisdictions. NERB is a member of ADEX and has adopted the ADEX Dental Examination Series.

ADEX Mission Statement

To provide the dental community with test construction and administrative standardization for national uniform dental and dental hygiene clinical licensure examinations. The schedule of these examinations, when delivered in the Curriculum Integrated Format (CIF), allows for early identification of deficiencies or weaknesses within clinical skill sets and provides opportunities for remediation in an educational environment. These examinations will demonstrate integrity and fairness in order to assist state boards of dentistry with their mission to protect the health, safety and welfare of the public by assuring that only competent and qualified individuals are allowed to practice dentistry and dental hygiene.

About the North East Regional Board of Dental Examiners, Inc. (NERB)

The North East Regional Board of Dental Examiners, Inc. (NERB) is a private not-for-profit organization that administers, scores and reports the results of examinations to assist licensing jurisdictions in the United States in their determination of the eligibility of candidates for dental and dental hygiene licensure.

NERB Member States and Jurisdictions

NERB member states and jurisdictions include

- Connecticut
- District of Columbia
- Hawaii
- Illinois
- Indiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Nevada
- New Hampshire
- New Jersey
- Ohio
- Oregon
- Pennsylvania
- Rhode Island
- Vermont
- West Virginia
- Wisconsin

Recognizing Jurisdictions

Many states and territories accept the ADEX Dental Examination Series for licensing determinations. **Because of the rapidly changing nature of the licensure process in the United States, candidates are advised to contact the board of dentistry in the state in which they seek licensure to determine whether ADEX Exam scores are acceptable in that state.**

Obtaining Licensure

Typically, applicants must complete three steps in order to obtain a dental license.

1. The candidate must take and successfully complete Parts I and II of the National Board Dental Examinations, typically offered during dental school.

2. The candidate must take and pass the appropriate state or regional clinical examination. NERB is one of these regional testing agencies. NERB does not require proof of passing the National Board examinations prior to taking the ADEX Examination Series. The school where the clinical examination takes place may have forms that need to be completed and may require a separate fee for the use of its facilities and/or equipment during the examination, payable to the school (not to NERB) prior to the exam.

3. The candidate must apply for state licensure. The state board of dentistry in the state in which the candidate wishes to practice will require proof that the candidate has passed Parts I and II of the National Boards and the appropriate state or regional clinical examination, and will also require proof of graduation from an accredited dental school and other documentation. Candidates should familiarize themselves with the requirements of the state(s) in which they wish to be licensed as soon as possible and complete an application with that individual jurisdiction. Passing the ADEX Examination Series does not automatically lead to a state dental license.

Candidates should address questions to the appropriate agency:

- The Joint Commission on National Dental Examinations can answer questions about Parts I and II of the National Boards.
- NERB can answer questions about the ADEX Examination Series.
- Questions regarding licensure or state requirements should be addressed to the appropriate state board of dentistry.

Eligibility for the ADEX Examination Series

Students (or graduate students) of record attending a dental school accredited by the American Dental Association Commission on Dental Accreditation or the Commission on Dental Accreditation of Canada are eligible to apply to take the Curriculum Integrated Format of the ADEX Dental Examination Series when the dean (or designated school official) certifies that the candidate is a student (or graduate student) and is sufficiently prepared to participate. Students in schools not participating in the Curriculum Integrated Format examinations or dentists who are graduates of U.S. or international dental schools are not eligible to participate in the Curriculum Integrated Format examinations. They should apply online at www.nerb.org/apply to sign up for the Traditional Format of the examination.

NERB Status

"NERB Status" is achieved when a candidate has successfully complied with all established rules and completed (as determined by state regulations) the ADEX Dental Examination Series with a score of 75 or more in each of the examination sections.

Candidates achieving "NERB Status" can reasonably expect to obtain licensure in any of the licensing jurisdictions recognizing the ADEX Dental Examination Series. Individual jurisdictions may require an additional state jurisprudence examination. **It is the candidate's responsibility to contact the licensing jurisdiction of interest to determine current eligibility and additional requirements.**

Test Development

The examination series is developed and revised by the ADEX Dental Examination Committee. This committee is comprised of representatives from every ADEX member state. The committee has considerable content expertise and also relies on practice surveys, current curricula, standards of competency and the American Association of Dental Boards (AADB)'s Guidance for Clinical Licensure Examinations in Dentistry to ensure that the content and protocol of the examination are current and relevant to practice. Examination content is also determined by such considerations as patient availability, logistical restraints and the potential to ensure that a skill can be evaluated reliably. The examination content and evaluation methodologies are reviewed annually.

The ADEX Dental Examination Series

Curriculum Integrated Format

II. Examination Overview

Examination Overview

The ADEX Dental Examination Series consists of five sections, each testing different aspects of the candidate's professional skill and knowledge.

Section 1: Computer-Based Diagnostic Skills Examination (DSE) – 100 points

CONTENT	FORMAT (as of Feb 1, 2013)
1. Patient Evaluation (**PE**) • Anatomical identification • Pathology of bone/teeth/soft tissue • Identification of systemic conditions • Radiology techniques/errors • Physical evaluation/laboratory diagnosis • Therapeutics 2. Comprehensive Treatment Planning (**CTP**) • Systemic diseases/medical emergencies/special care • Oral medicine • Endodontics • Orthodontics • Restorative dentistry • Oral surgery • Pediatric dentistry 3. Periodontics, Prosthodontics and Medical Considerations (**PPMC**) • Medical emergencies • Infection control • Medical considerations in treatment planning • Periodontal diagnosis and treatment planning • Periodontal treatment and follow-up • Prosthodontic diagnosis and treatment planning • Prosthodontic treatment and follow-up	Simulated patients presented on a computer. (The computer-based examination is administered at the Prometric Testing Center of the candidate's choice.) 150 scored questions • PE: 20% • CTP: 40% • PPMC: 40% Time: 4.25 hours

Section II: Endodontics Clinical Examination – 100 points

CONTENT	FORMAT
1. Access opening on a first molar 2. Access opening, canal instrumentation and obturation (tooth #8)	Performed on a manikin Time: 3 hours

Section III: Fixed Prosthodontics Clinical Examination – 100 points

CONTENT	FORMAT
1. Preparation – PFM crown as one 3-unit bridge abutment on a first bicuspid 2. Preparation – Full cast crown on a first molar as the other abutment for the same 3-unit bridge 3. Preparation – Ceramic crown (tooth #9)	Performed on a manikin Time: 4.25 hours

Section IV: Periodontal Clinical Examination – 100 points
(Optional, depending on state licensing requirements)

CONTENT	FORMAT
Assignment 1. Case acceptance 2. Pocket depth qualification 3. Subgingival calculus detection *Treatment* 4. Subgingival calculus removal 5. Supragingival plaque/stain removal 6. Tissue and treatment management	Performed on a patient Time: 3 hours or less at the candidate's discretion Treatment Time: 1.5 hours (after case acceptance)

Section V: Restorative Clinical Examination – 100 points

CONTENT	FORMAT
1. Anterior restoration: Class III composite - cavity preparation and restoration 2. Posterior restoration: candidate's choice: • Class II amalgam - cavity preparation and restoration • Class II traditional composite - cavity preparation and restoration • Class II posterior proximal occlusal (slot) composite – cavity preparation and restoration	Performed on a patient Time: 6 hours or less at the candidate's discretion

About the Curriculum Integrated Format

The Curriculum Integrated Format (CIF) is the pre-graduation format of the ADEX Dental Examination Series adopted by NERB for senior dental students of record.

Both the Curriculum Integrated Format and the Traditional Format examinations are identical in content, criteria and scoring. The major difference between the two formats is in the sequencing of examination sections.

- In the **Traditional Format**, the manikin- and patient-based examination sections are administered in their entirety over the course of two consecutive days.
- In the **Curriculum Integrated Format**, examination sections are administered in segments over the course of up to 18 months to eligible dental students or students in a graduate program at a dental school where this examination is offered. The spaced sequencing of this format provides the opportunity for candidates to remediate when necessary within the dental school curriculum and provides for the timely issuance of licenses upon graduation.

There are separate manuals for each examination format. Please check the front of this Candidate Manual to be sure you have received the correct manual and documents.

Examination Schedules

Dates and Sites

Specific examination dates for a participating dental school can be found on the NERB website, www.nerb.org, and are also available through the NERB coordinator at each dental school. A current listing of the locations of Prometric Testing Centers at which the computer-based Diagnostic Skills Examination (DSE) Section is offered throughout the year can be accessed by going to the Prometric website (www.2test.com). The DSE Section is offered to candidates participating in the Curriculum Integrated Format for the Class of 2013 starting on or about August 4, 2012.

Curriculum Integrated Format 18-Month Rule

All five sections of the ADEX Examination Series must be completed successfully within 18 months after the first section of the series is initiated.

If any section of the series is not successfully completed within 18 months, regardless of the reason, all four (or five, as required by state regulations) sections must be retaken utilizing the Traditional Format. To retake any portion of the examination, the candidate must apply again online at www.nerb.org/apply, update his/her profile and submit the applicable fees.

Section I: Diagnostic Skills Examination (DSE) (computer-based)

The computer-based ADEX Diagnostic Skills Examination (DSE) Section is administered at a Prometric Testing Center upon authorization by NERB and will be available beginning on or about August 4, 2012 for candidates participating in the Curriculum Integrated Format for the Class of 2013. The DSE Section may be taken either before or after the patient-based and manikin-based examination sections.

Candidates may take the DSE section up to three times within the 18-month exam period. (Remember: all sections must be completed successfully within 18 months after the first section of the series is initiated.) Scores on the ADEX DSE are generally reported at the end of the first full week of the month following the month in which the DSE was taken. **Therefore, candidates who wish to take full advantage of all three opportunities to pass the DSE prior to graduation should complete their first effort before December 31, 2012 and their second effort by March 31, 2013. The registration for the third attempt should be made by April 13, 2013.**

Additionally, candidates should consider the availability of appointments at Prometric Testing Centers when planning to take the DSE. **Candidates waiting until the latter part of April may encounter difficulties scheduling appointments prior to graduation.**

Sections II and III: Prosthodontics and Endodontics Clinical Examinations (manikin-based)

The Prosthodontics and Endodontics Examination Sections will be administered at the candidate's dental school on a specified date(s) between August and October 2012, as determined by NERB and the dean of the dental school.

Candidates may take these examination sections up to three times. The first opportunity to retake the manikin-based sections will be on a specified date(s) in December 2012, and the second opportunity will be on a specified date(s) during April-May 2013. **Both retake opportunities will be administered at regional locations that may or may not be the candidate's own school.** If a candidate has neither passed nor exhausted his/her three examination opportunities following the April-May testing dates, he/she still up to 18 months from the date when he/she took the first section of the series to complete a third attempt.

Sections IV and V: Restorative and Periodontal Clinical Examinations (Patient - based)

The Restorative and Periodontal Clinical Examination Sections will be administered at the candidate's dental school on a specified date(s) in February-March 2013, as determined by NERB and the dean of the dental school.

Candidates may take these examination sections up to three times. The first opportunity to retake the patient-based sections will be on a specified date(s) during April-May 2013, and the second opportunity will be during the Summer or Winter examination series. **Both retake opportunities will be administered at regional locations that may or may not be the candidate's own school.** If a candidate has not either passed nor exhausted his/her three examination opportunities following the Summer exams, he/she still has up to 18 months from the date when he/she took the first section of the series to complete a third attempt.

Schedule Policies

First-time applicants must register for the initial examination package of all five clinical examinations administered by NERB. The Prosthodontics and Endodontics Examinations and Restorative and Periodontal Clinical Examinations may be taken only **once during each** of the periods listed above (i.e., August-October round, February-March round) as agreed upon by NERB and the dean of the school hosting the examination.

Upon registering, all candidates are automatically scheduled to take the initial offering of the Prosthodontics and Endodontics Examination Sections (manikin-based sections) in the August-October period and the initial offering of the Restorative and Periodontal Clinical Examination Sections (patient-based sections) in the February-March period. This requirement may be waived or accommodated due to **extenuating circumstances not under the control of the candidate and subject to the full discretion of NERB**. A request for waiver from the requirement will be considered on an individual basis when received by NERB no less than 30 days before the scheduled examination date for foreseeable circumstances and no later than 15 days after the scheduled examination date in instances of unforeseeable situations. Requests **must** be made in writing to the NERB Director of Finance and administration and **must** include original documentation in support of the request. Notification will be sent immediately after determination is made by NERB. Should the waiver or accommodation be granted, the terms and conditions for future examinations as set by NERB will be included.

Candidates who do not complete the initial (August-October period) Prosthodontics and Endodontics Clinical Examination Sections or the initial (February-March period) Restorative and Periodontal Clinical Examination Sections and who do not receive an accommodation recommended by NERB in lieu of a waiver may be disqualified for the remainder of the Curriculum Integrated Format and forfeit their fee. This determination is made at the sole discretion of NERB.

Requests for waiver of the requirement to participate in the initial Prosthodontics and Endodontics Clinical Examinations (August-October) or the initial Restorative or Periodontal Clinical Examination (February-March) received more than 15 days after the date of the scheduled examination will not be honored and the fee will be forfeited.

A nonrefundable administrative processing fee of $100 for a request for waiver is applicable at all times and under all circumstances.

Score Release

Because the opportunity for remediation within the dental school is intended to be a significant feature of the Curriculum Integrated Format, the candidate's individual scores will be released electronically to the candidate's dental school, in addition to the candidate him/herself, to facilitate the remediation. **Scores are not released to candidates or their representatives by telephone or fax.** Scores are not released to anyone other than the candidate, the candidate's dental school and the NERB participating jurisdictions, unless a request for a Score Report is received. (See the section titled Score Report Request below).

Scores are automatically reported for each individual ADEX Dental Examination to the participating NERB licensing jurisdictions.

ADEX DSE scores are reported monthly. The Prosthodontics and Endodontics Section scores are reported approximately three days after the examiners complete evaluation of the typdodonts in the Central Office. (This may be two or three weeks or more after the examination.) Restorative and Periodontal Clinical Examination Section results are reported electronically within one week after the date of the candidate's examination.

A critique of clinical performance for all failing candidates is furnished to the candidate and the candidate's school along with the examination score. In order to maintain the security of the examinations, this critique is issued in lieu of a review of actual examination papers or clinical paper or Electronic Evaluation Forms.

Score Report Request

Candidates may request their scores be sent to other states or individuals by utilizing the *Score Report* link found in the middle of the first page on the NERB website: www.nerb.org.

Examination Retakes

A candidate for "NERB Status" should apply to retake **each** failed and/or incomplete portion of the examination during the following available period. A candidate may attempt each examination section up to three times during the 18 months after the date when he/she took the first section.

To retake examinations, candidates must apply through the link on the NERB website (nerb.org) to Online Registration. Each section must be applied for individually and candidates should pay for all examinations at one time once they have registered for all sections they wish t take.

For the DSE, candidates should choose Prometric as their testing site. Once the DSE examination is paid for and approved, candidates will receive an email stating that their eligibility number is listed in their profile and that they should contact Prometric to schedule an appointment.

For clinical examinations, once the exam is paid for and approved, the test site will be listed as tentative until the site scheduling is finalized. Candidates will receive a notification email when the site is finalized.

Remediation

NERB does not require documentation of remedial education prior to reexamination for any section of the ADEX Dental Examination Series.

Remediation should be provided at a candidate's school as part of the CIF examination process. However, for the Traditional ADEX examination, there are several participating licensing jurisdictions which **do** require remedial education prior to retaking a failed section of the exam series. Candidates should contact the board of dentistry in the state in which they require licensure to determine requirements for remediation. It is the candidate's responsibility to obtain and complete all requirements for remedial education in accordance with the requirements of the licensing jurisdictions. NERB does not assume any responsibility for providing this information or for monitoring the completion of such requirements prior to examination.

Special Testing Provisions

NERB will administer the ADEX Dental Examination Series to an individual with a documented physical and/or learning disability that impairs sensory, manual or speaking skills in a place and manner accessible to persons with disabilities or will offer reasonable alternative accessible arrangements for such individuals. Efforts will be made to ensure that the examination results accurately reflect the individual's aptitude or achievement level rather than reflecting the individual's impaired sensory, manual or speaking skills, except where those skills are factors the examination is intended to measure.

NERB will provide appropriate auxiliary aids for such persons with impaired sensory, manual or speaking skills unless providing such auxiliary aids would fundamentally alter the measurement of the skills or knowledge the examination is intended to test. To ensure that auxiliary aids or other requested modifications are available and can be provided, candidates requesting such modifications or auxiliary aids must

- **Submit, in writing,** a request for the auxiliary aid or modification stating the exact auxiliary aid or modification(s) needed. **Requests received after the registration deadline date and retroactive requests will not be considered.**
- **Provide documentation of the need for the auxiliary aid or modification**, indicating any portion of the dental examination for which such auxiliary aid or modification will be needed.
- **Provide a letter from an appropriate healthcare professional** documenting the disability. This letter must be received by NERB **no later than 45 days prior to the date of the examination.**

In providing such auxiliary aids or modifications, NERB reserves the ultimate discretion to choose between effective auxiliary aids or modifications and reserves the right to maintain the security of the examination.

All information obtained regarding a candidate's physical and/or learning disability will be kept confidential, with the following exceptions:

- Authorized individuals administering the examination may be informed regarding any auxiliary aid or modification.
- First aid and safety personnel at the test site may be informed if the disability might require special emergency care.

NERB reserves the right to administer the DSE Section in an alternative form other than by computer and will arrange with the candidate on an individual basis.

Requests for Special Accommodations Due to Religious Constraints

Candidates requesting special accommodations due to religious constraints must request a separate Application for Religious Accommodations from the NERB Director of Examinations and submit that application with their regular examination application by the deadline.

Examination Scoring System

The scoring system is criterion referenced and is based on an analytical model. The examination is conjunctive, in that its content is divided into five separate sections containing related skill sets, and each section scored independently. Candidates must demonstrate competence in each of the five sections. A compensatory scoring system is used within each examination section to compute the final score for each section as explained below.

To pass the ADEX Dental Examination Series and achieve "NERB Status," the candidate must score 75 or better on each exam section. While only state boards of dentistry can legally determine the standards of competency for licensure in their states, NERB has recommended a score of 75 to be a demonstration of sufficient competency, and the participating state dental boards have agreed to accept this standard.

Section I: Scoring System for Diagnostic Skills Examination (DSE) - 100 Points

The ADEX Diagnostic Skills Examination (DSE) Section consists of three subsections:

- Patient Evaluation (PE)
- Comprehensive Treatment Planning (CTP)
- Periodontics, Fixed Prosthodontic and Medical Considerations (PPMC)

The score for the DSE Section is based on the percentage of items answered correctly and scaled to equate scores from year to year. A scaled score of 75 or higher is required to pass.

Sections II – V: Scoring System for Manikin- and Patient-Based Examinations

NERB and other testing agencies throughout the U.S. have worked together through ADEX to draft and refine the performance criteria for each procedure in this examination. For the majority of those criteria, gradations of competence are described across a 4-level rating scale. Those criteria appear in the manual and are the basis for the scoring system. The four rating levels may be generally described as follows:

- **Satisfactory.** The treatment is of good to excellent quality, demonstrating competence in clinical judgment, knowledge and skill. The treatment adheres to accepted mechanical and physiological principles permitting the restoration of the tooth to normal health, form and function.
- **Minimally Acceptable.** The treatment is of acceptable quality, demonstrating competence in clinical judgment, knowledge and skill; however, slight deviations from the mechanical and physiological principles of the satisfactory level exist which do not damage the patient nor significantly shorten the expected life of the restoration.
- **Marginally Substandard.** The treatment is of poor quality, demonstrating less than desirable clinical judgment, knowledge of or skill in the mechanical and physiological principles of restorative dentistry, which if left unmodified, will cause damage to the patient or substantially shorten the life of the restoration.
- **Critically Deficient.** The treatment is of unacceptable quality, demonstrating critical areas of incompetence in clinical judgment, knowledge or skill of the mechanical and physiological principles of restorative dentistry. The tooth may or may not be temporized, or the treatment plan must be altered and additional care provided in order to sustain the function of the tooth and the patient's oral health and well-being.

In Sections II - V, a rating is assigned for each criterion in every procedure by three different examiners evaluating independently. Based on the level at which a criterion is rated by at least two of the three examiners, points will be awarded to the candidate. If none of the three examiners' ratings are in agreement, the median score is assigned. However, if a criterion is assigned a rating of *critically deficient* by two or more examiners, **no points are awarded for that procedure or for the examination section**.

Description of Sections II- V and the number of criteria that are evaluated for the procedures in each section appear below:

Section II: Endodontics Examination Section – 100 Points

The Endodontics Examination Section is a manikin-based examination consisting of three procedures:

1. Access opening and identification of canals on an artificial posterior tooth
2. Access opening and canal instrumentationof an artificial anterior tooth
3. Obturation of the same artificial anterior tooth

Anterior Endodontics	12 Criteria
Posterior Endodontics	6 Criteria

Section III: Fixed Prosthodontics Section – 100 Points

The Prosthodontics Examination Section is a manikin-based examination consisting of three procedures completed on artificial teeth:

1. Cast gold crown preparation as a posterior abutment for a 3-unit bridge
2. Porcelain-fused-to-metal crown preparation as an anterior abutment for the same 3-unit bridge, plus an evaluation of the line of draw for the bridge abutment preparations
3. All-ceramic crown preparation on an anterior central incisor

Cast Gold Crown Preparation	13 Criteria
Porcelain-fused-to-metal Crown Preparation	12 Criteria
Ceramic Crown Preparation	12 Criteria

Sections IV: Periodontal Examination – 100 Points

The Periodontal Examination is a patient-based examination consisting of four parts.

1. Treatment Selection – Penalties are assessed for those areas that do not meet the described criteria for case acceptance.
2. Calculus Detection and Removal. – 90 points total with 7.5 points for each surface of subgingival calculus correctly detected and removed.
3. Subgingival Deposit Removal – 6 points total with one point for each one of the first 6 teeth selected in ascending order.
4. Treatment Management – 4 points total for pain control and tissue management that meets the written criteria.

Sections V: Restorative Examination – 100 Points

The Restorative Examination is a patient-based examination and consists of one anterior composite preparation and restoration and one posterior preparation restoration that may be an amalgam, a traditional composite or a proximal occlusal (slot) composite.

Class III Composite Preparation	12 Criteria
Class III Composite Finished Restoration	10 Criteria
Class II Amalgam Preparation	16 Criteria

Class II Amalgam Finished Restoration	9 Criteria
Class II Composite Preparation	16 Criteria
Class II Composite Finished Restoration	11 Criteria
Posterior Prox. Occlusal Composite Preparation	14 Criteria
Posterior Prox. Occlusal Composite Finished Restoration	11 Criteria

Penalties

Throughout the examination, the conduct and clinical performance of the candidate will be observed and evaluated. A number of considerations are weighed in determining the final scores. Penalties are assessed for violation of the examination standards for certain procedural errors as described below:

- Any of the following may result in a deduction of points from the score of the entire examination part or dismissal from the examination:
    - Violation of universal precautions, infection control or disease barrier technique or failure to dispose of potentially infectious materials and clean the operatory after individual examination sections
    - Unprofessional demeanor: unkempt, unclean or unprofessional appearance; inconsiderate or uncooperative behavior with other candidates, examiners or testing site personnel
    - Poor patient management, disregard for patient welfare or comfort
    - Improper management of significant history or pathosis
    - Request or repeated requests to modify/extend the approved treatment plan without clinical justification (i.e., attempting to have the examiner "coach" the candidate)
    - Unsatisfactory completion of required modifications
    - Improper operator/patient/manikin position
    - Improper record keeping
    - Improper treatment selection
    - Improper liner/base placement
    - Inadequate isolation
    - Administration of anesthetic before approval of tooth selection or periodontal assignment by examiners
- The following will result in the loss of all points for an individual examination:
    - Temporization or failure to complete a finished restoration
    - Violation of examination standards, rules or guidelines
    - Treatment of teeth other than those approved or assigned by examiners
    - Gross damage to adjacent teeth or tissue
    - Unrecognized exposure
    - Unavoidable mechanical exposure that is poorly managed or irreparable
    - Avoidable mechanical pulpal exposure
    - Failure to complete treatment within the stated time guidelines

- Critical lack of diagnostic/clinical judgment skills. This penalty may only be assigned by the Restorative Captain and would be applied when the candidate's lack of clinical judgment or clinical skills seriously jeopardizes the prognosis of the treatment and/or the patient's well-being. For example,
    - The candidate requests a modification anticipating pulpal exposure, but the preparation is still in enamel.
    - The candidate requests a modification to extend the preparation, but an unauthorized extension already exists.
    - The candidate tells the Clinic Floor Examiner (CFE) that an exposure exists. The CFE finds an exposure that is determined to be unjustified, and there has been no prior approved request for modification in anticipation of the exposure.
    - The candidate tells the CFE that an exposure exits. The CFE finds no exposure, nor do the examiners at the Express Chair.

This listing is not exhaustive, and penalties may be applied for errors not specifically listed, since some procedures will be classified as unsatisfactory for other reasons, or for a **combination** of several deficiencies.

Professional Conduct

All substantiated evidence of falsification or intentional misrepresentation of registration requirements, collusion, dishonesty or use of unwarranted assistance during the course of the examination will result in automatic failure of the entire examination series.

In addition, there will be no refund of examination fees and the candidate will not be allowed to reapply for reexamination for one full year from the time of the infraction. Any of the following infractions will result in failure of the entire examination series:

- Falsification or intentional misrepresentation of registration requirements
- Cheating (Candidate will be dismissed immediately)
- Demonstrating complete disregard for the oral structures or welfare of the patient
- Demonstrating a complete lack of skill and dexterity to perform the required clinical procedures
- Misappropriation of equipment (theft)
- Receiving unauthorized assistance
- Alteration of examination records and/or radiographs

The ADEX Dental Examination Series

Curriculum Integrated Format

III. Policies and Procedures

Policies and Procedures

Standards of Conduct

NERB strives to evaluate the candidate's clinical judgment and skills in a fair manner. In addition, conduct, decorum and professional demeanor are evaluated. **The candidate is required to adhere to the rules, regulations and standards of conduct for the ADEX Dental Examination Series.**

1. **Personal/professional conduct**. Any substantiated evidence of collusion, dishonesty, use of unauthorized assistance or intentional misrepresentation during registration or during the course of the examinations or failure of the candidate to carry out a directive of the chief examiner shall automatically result in failure of all five examination sections. The candidate and assisting auxiliary must behave in an ethical and proper manner. Patients shall be treated with proper concern for their safety and comfort. Improper behavior is cause for dismissal from the examination at the discretion of the chief examiner and will result in failure of the examination. Additionally, the candidate shall be denied reexamination by NERB for one full year from the time of the infraction.

2. **Termination of the examinations**. NERB reserves the right to terminate or delay the examinations at any time if 1) that action becomes necessary to safeguard the health, safety or comfort of the patient, 2) the candidate or examiners are threatened in any manner or 3) other interfering events occur that are not under the control of NERB.

3. **Completion of the examinations**. All five examination sections (or four, if the candidate is not taking the Periodontal Section) of the ADEX Dental Examination Series must be completed within the specified time frame in order to be considered for "NERB Status." Examination procedures performed outside the assigned time will be considered incomplete, and the candidate will fail the examination section. **If all specified materials and required documentation are not turned in at the end of an examination section, that section will be considered incomplete, and the candidate will fail the section.**

4. **Misappropriation and/or damage of equipment**. No equipment, instruments or materials shall be removed from the examination site without written permission of the owner. Willful or careless damage of dental equipment, typodonts, manikins or shrouds may result in failure. All resulting repair or replacement costs will be charged to the candidate and must be paid to NERB before the candidate's examination results will be released.

5. **Submission of examination records**. All required records and radiographs must be turned in before the examination is considered complete. **If all required documentation is not turned in at the end of the examination, the examination will be considered incomplete, and the candidate will fail all exam sections involved.**

6. **Assigned procedures**. Only the treatment and/or procedures assigned may be performed. (In the Periodontal Clinical Examination Section, all surfaces of the selected teeth may be scaled and polished at the discretion of the candidate, but only the selected surfaces will be evaluated.) Performing other treatment or procedures may result in failure of the examination.

7. **Electronic recording devices and cameras.** The use of electronic recording devices or cameras by the candidate, an auxiliary or a patient during any part of the examination is a violation of examination guidelines and may result in failure of the entire ADEX Dental Examination Series. However, intra-oral photographs may be taken by authorized NERB examiners or school personnel during the course of the examination for the purpose of future examiner standardization and calibration.

8. **Electronic equipment**. The use of pagers, cell phones, computers, DVDs, CDs, PDAs, Blackberries, radios (including walkie-talkies with or without earphones) and any other electronic equipment is not permitted on the clinic floor by candidates, auxiliaries or patients during the examination. Any such use will be considered unprofessional conduct and may result in dismissal from the examination.

Standards for Section I: Diagnostic Skills Examination (DSE)

1. **Extraneous materials.** Only materials distributed or authorized by Prometric Testing Centers may be brought to the DSE Section. Use of unauthorized materials will result in failure of the entire examination series. No textbooks or study materials are permitted at the Prometric Testing Center at any time.
2. **Time limits.** A specified total amount of time is allowed for each subsection (PE, CTP, PPMC) of the Diagnostic Skills Examination Section. Once a candidate has locked out of a designated subsection of the DSE, he/she may not re-enter that section.
3. **Timely arrival.** Candidates must adhere to the appointment time established by Prometric. Failure to arrive on time will result in forfeiture of the examination fee.
4. **Behavior at the Prometric Testing Center.** Unseemly behavior of the candidate or improper behavior toward personnel at the Prometric Testing Center will result in failure of the DSE and forfeiture of the examination fee.
5. **Examination security.** Security measures established by NERB and Prometric must be followed. Failure to do so may result in failure of the examination series.

Standards for Sections II and III: Endodontics and Fixed Prosthodontics Examinations

1. **Manikins.** Only manikins, typodonts and teeth approved by NERB may be used for the Fixed Prosthodontic and Endodontic Clinical Examination Sections. Violation of this standard will result in failure of the examination section.
2. **Assigned operatories.** The candidate shall work only in the clinic, operatory or laboratory spaces authorized by NERB. Violation of this standard will result in failure of the examination section.
3. **Patient management.** The manikin must be considered as a patient and treated in the same manner and with the same consideration. Violation of this standard will result in failure of the examination section.
4. **Infection control**. Candidates must follow the infection control procedures recommended by the Centers for Disease Control and Prevention (as with a live patient), including setting up prior to the examination and cleaning up after the examination has ended. Violation of this standard may result in failure of the examination section.
5. **Examination start time.** Treatment procedures may not be initiated prior to the established starting time (8:30 a.m.). Violation of this standard will result in failure of the examination section.
6. **Assigned teeth.** Once a procedure has been started, the procedure must be carried to completion on the assigned tooth/teeth with no substitutions permitted. Substitution of teeth or preparation of the wrong tooth/teeth will result in failure of the Fixed Prosthodontics or Endodontics Clinical Examination Sections. If a candidate discovers that the wrong tooth has been prepared, he/she must immediately contact the CFE.
7. **Isolation.** Adequate and proper isolation must be used for the Endodontics Examination Section. Vioation will result in a penalty.
8. **Equipment failure**. A CFE must be notified immediately in case of equipment failure; he/she will contact school maintenance personnel. The malfunction must be corrected or the candidate relocated. Extension of examination time is not granted because of equipment malfunction or failure.

9. **Operating position**. The manikin must be mounted and maintained in a physiologically acceptable operating position while performing the Fixed Prosthodontics and Endodontics Clinical Examination Sections. The facial shroud must be maintained in the same position as the normal facial tissue. Violations will result in a reduction in the score.
10. **Removal of typodont or manikin.** During the examination, the teeth, typodont or manikin may not be removed or dismantled without specific permission from a CFE. Violations will result in penalties.
11. **Assistants.** Auxiliary personnel and/or laboratory technicians are not permitted to assist a candidate during the Fixed Prosthodontics or Endodontics Clinical Examination Sections. Violation may result in failure of these examination sections.

Standards for Sections IV and V: Restorative and Periodontal Clinical Examinations

1. **Anonymity.** The anonymous testing procedure prevents the possibility that any person involved with the evaluation of the examination may know, learn of or establish the identity of a candidate or relate or connect the patient or work-product to a particular candidate. The candidate's name and school information should not appear on any examination forms, materials or instruments. Grading examiners will be physically isolated from the candidates in a separate area of the clinic, and the movement of patients from the clinical areas to the grading area shall be controlled by the use of testing agency messengers/assistants. All examination forms and materials are identified by the candidate's identification number, which is assigned prior to the examination.
2. **Clinic attire.** Candidates must wear clinic attire that meets CDC and OSHA standards. No bare arms or legs or open-toed shoes are allowed in the clinic areas. Lab coats, lab jackets and/or long-sleeved protective garments are all acceptable. Color and style are not restricted. There must be no personal or school identification on clinic attire other than the candidate identification badge.
3. **Management of significant history and pathosis.** The candidate shall accurately complete the appropriate Medical History Form and establish a diagnosis and treatment plan as required for each selected patient. Misinformation or missing information that would endanger the patient, candidate, auxiliary personnel or examiners is considered cause for dismissal from the examination.
4. **Assigned operatories.** Candidates must perform all procedures in their assigned operatories. Working in areas not authorized by NERB will result in failure of the examination section.
5. **Patient management.** The candidate and assisting auxiliary must behave in an ethical and proper manner. Patients shall be treated with proper concern for their safety and comfort. Chairside assistants must register with the NERB chief examiner and display the proper identification. Failure to follow directions and instructions from examiners will be considered unprofessional conduct. Improper behavior is cause for dismissal from the examination and will result in failure of the examination. Additionally, the candidate shall be denied reexamination by NERB for one full year from the time of the infraction.
6. **Infection control standards**. Candidates and auxiliary personnel must follow the infection control procedures recommended by the Centers for Disease Control and Prevention, including setting up prior to the examination and cleaning up after the examination has ended. Violation of the infection control standards may result in failure of the examination.
7. **Treatment selection.** Candidates must present treatment selections that fulfill examination requirements published for each procedure. Candidates who fail to meet the treatment standards will not be allowed to continue with the examination section. Candidates must make treatment selection decisions independently (without the help of faculty and/or colleagues).

8. **Isolation of the restorative field.** Adequate and proper isolation must be provided as necessary to avoid contamination and as stipulated by examination requirements. Violation will result in penalties.

9. **Tissue management.** There shall be no unwarranted damage to either hard or soft tissue. Incompetent or careless management of tissue will result in penalties.

10. **Equipment failure**. In case of equipment failure, the clinic floor captain must be notified immediately; he/she will request that maintenance personnel assess and correct the specific situation. Extension of examination time will not be granted. Maintenance and repair of equipment (chair, light and dental unit) is the responsibility of and is provided by the school.

11. **Failure to follow directions.** Failure to follow directions and instructions from examiners will be considered unprofessional conduct. Unprofessional conduct and improper behavior are cause for dismissal from the examination and will result in failure of the examination series.

12. **Identification badges**. During the examination, candidate ID badges must be worn at all times. Note: an identification badge is not issued for the computer-based DSE Section.

13. **New technology.** New technologies are constantly being developed and marketed in dentistry. However, until such time as these innovations become the standard of care and are readily available to all candidates at all testing sites, the use of such innovative technologies are discouraged for use in this examination. If there is a question about such new technologies, contact the NERB Central Office.

14. **Test site fees.** Schools may charge a rental fee for use of instruments, clinic facilities, supplies and disposables. This fee is independent of the examination fee and is not collected by NERB. Testing site fees vary from school to school. If fees are not paid in advance, candidates should be prepared to pay the fee on the day of the examination. School-specific information about fees and forms of payment will be included in the information sent electronically to the candidate or may be obtained by contacting the NERB coordinator at the school.

15. **Tooth identification**. The tooth numbering system 1-32 will be used throughout the examination. In this system, the maxillary right third molar is #1 and the mandibular left third molar is #17.

16. **Treatment consent.** The candidate must complete a Patient Consent Form for each patient treated during the patient-based examination sections. This form can be found in the back of this manual. Copies may be made and may be completed and signed by the patient prior to the examination date. However, signed copies must be presented to the examiners at the time of patient check-in.

17. **Anesthetic/Analgesic.** For both the Restorative and Periodontal Examination Sections, the anesthetic section on the Progress Form must be completed whether or not local anesthesia will actually be administered. Candidates must receive permission from the appropriate NERB examiner before administering anesthesia at any point during the examination. If the patient has previously been given an anesthetic on the same day, the candidate must note the previous anesthesia on the Progress Form and obtain signed permission (by a CFE for the Restorative Clinical Examination and by either an Evaluation Station Examiner or CFE for the Periodontal Clinical Examination) before administering more anesthetic solution. The candidate is responsible for ensuring that the appropriate anesthetic is correctly recorded on the Progress Form and administered in the proper dosage. Inhalation or intravenous analgesia or anesthetics are not permitted for the examination. Violation of this standard will result in failure of the examination section.

18. **Auxiliary personnel.** Candidates may use chairside assistants during the Restorative and Periodontal Examination Sections (patient-based sections). Individuals who meet the following criteria may not serve assistants:

    - Individuals under 18 years of age

- Dentists and dental hygienists (licensed or unlicensed)
- Third- or fourth-year dental students
- Dental hygiene students in the final year of study
- Dental technicians

If a chairside assistant is employed, the assistant must be cleared by a NERB representative at the Coordinator Desk on the day of the examination and prior to the start of the examination. The candidate must have a completed Candidate Agreement for the Use of a Chairside Assistant and an Authorized Chairside Assistant ID Card, which are provided with the candidate ID card.

The chairside assistant must present two forms of identification (one with a photograph) and two separate 2" x 2" photos, one to be attached to the top of the Candidate Agreement for the Use of a Chairside Assistant and one to be attached to the bottom of that form to serve as the assistant's ID. (The chairside assistant must also bring one additional 2" x 2" photo for each additional candidate assisted. Auxiliaries may assist more than one candidate on a given examination day but may work with only one candidate at a time.)

While on the clinic floor, auxiliaries must wear a photo ID badge provided by NERB. The chairside assistant may assist only the one candidate to whom he/she is assigned for a given examination section.. A candiate whose auxiliary assists more than one candidate at a time may fail the examination. Candidates are responsible for the registration of the assistant and for the conduct of their auxiliaries during the examination. Auxiliaries are not permitted to function as expanded-duty assistants.

19. **Interpreters.** Candidates should employ the services of an interpreter when their patient does not speak English or has a hearing impairment that cannot be corrected. (The use of an interpreter is particularly important when the patient has a history of medical problems or is on medications.)

    Individuals who meet the following criteria are not permitted to serve as interpreters:

    - Individuals under 18 years of age
    - Faculty members
    - Dentists and dental hygienists (licensed or unlicensed)
    - Third- or fourth-year dental students
    - Dental hygiene students in the final year of study
    - Individuals serving as chairside assistants

    If an interpreter is employed, the candidate must notify the personnel at the Coordinator Desk, who will provide the required Interpreter Disclosure Statement and Interpreter ID form. The candidate must bring two separate 2" x 2" photos of the interpreter, one to be attached to the top of the Interpreter Disclosure Statement and one to be attached to the bottom of that form, which serves as the interpreter's ID.

    While on the clinic floor, the interpreter must wear a photo ID badge provided by NERB at all times. Interpreters must wait outside the treatment area until requested by a CFE and must leave the treatment area or Evaluation Station once the CFE indicates that the interpreter is no longer needed. Candidates are responsible for the registration and conduct of their interpreter during the examination.

General Guidelines for Clinical Exercises

Penalties

Throughout the examination, the candidate's professional conduct and clinical performance will be evaluated. A number of considerations will weigh in determining the candidate's final score, and penalties may be assessed for violation of examination standards and/or for certain procedural errors, as defined and described within this manual.

Reasons for Dismissal

In addition to the standards of conduct listed in the previous section, the following list is provided as a quick reference for candidates. While the following is not an all-inclusive listing, it does provide examples of behaviors that may result in dismissal/failure of the examination:

- Using unauthorized equipment at any time during the examination time
- Altering patient records or radiographs
- Performing required examination procedures outside the allotted examination time
- Failure to follow the published time limits and/or complete the examination within the allotted time
- Receiving assistance from another practitioner, including another candidate, dentist, school representative(s), etc.
- Exhibiting dishonesty
- Failure to recognize or respond to systemic conditions that potentially jeopardize the health of the patient, and/or total disregard for patient welfare, comfort and safety
- Unprofessional, rude, abusive, uncooperative or disruptive behavior to other candidates, patient and/or exam personnel
- Misappropriation or thievery during the examination
- Noncompliance with anonymity requirements
- Noncompliance with established guidelines for asepsis and/or infection control
- Charging patients for services performed
- Use of cellular telephones, pagers or other electronic equipment in patient care areas
- Use of electronic recording devices or cameras by the candidate, auxiliary or patient during any part of the examination

Patient's Agreement to Partial Treatment Plan

In many instances, the treatment that is provided during a clinical examination represents only a portion of the care that is appropriate for the patient within a comprehensive treatment plan. The patient must be advised that only a portion of the individual treatment plan can be completed during the ADEX Dental Examination Series and that further restorative and periodontal care will likely be required, either before or after the examination is completed. The patient will also be apprised of this fact in the Patient Consent Form he/she is asked to sign prior to the examination.

Follow-Up Care

In the event that treatment provided during the examination cannot be satisfactorily completed (for example, due to temporization) during the examination, arrangements must be made for the patient to receive follow-up care. A Follow-Up Form will be provided so that a record of the patient's needs is

maintained. **The candidate should give prior consideration to what arrangements might need to be made for his/her patients to receive follow-up care. Such arrangements include who will provide the treatment and who will be financially responsible.**

Authorized Photography

At some selected test sites, oral photographs may be taken during the examination by an authorized photographer retained by NERB for the purpose of capturing a broad representation of actual procedures that can be used for examiner calibration.

Infection Control Procedures

Candidates must follow the current recommended infection control procedures as published by the Centers for Disease Control and Prevention for the Restorative, Periodontal, Fixed Prosthodontics and Endodontics Examination Sections. These infection control procedures must begin with the initial set-up of the unit, continue throughout the Restorative, Periodontal, Fixed Prosthodontics and Endodontics Clinical Examination Sections and include the final clean-up of the operatory. It is the candidate's responsibility to ensure that both the candidate and his/her auxiliary fully comply with these procedures. Failure to comply will result in loss of points, and any violation that could lead to direct patient harm will result in failure of the examination.

As much as possible, dental professionals must help prevent the spread of infectious diseases. Because many infectious patients are asymptomatic, all patients shall be treated as if they are, in fact, contagious. Use of barrier techniques, disposables whenever possible, and proper disinfection and sterilization are essential. Candidates must adhere to the following infection control procedures:

1. Barrier protection
    - Gloves must be worn when setting up or performing any intra-oral procedures and when cleaning up after any treatment. If rips or tears occur, don new gloves. Do not wear gloves outside the operatory. Patients with known allergies to latex will **not** be allowed to sit for the examination.
    - Wash and dry hands between patients and whenever gloves are changed. Do not wear hand jewelry that can tear or puncture gloves.
    - Wear clean, long-sleeved uniforms, gowns or laboratory coats, and change them if they become visibly soiled. Remove gowns or laboratory coats before leaving the clinic area. Wear facemasks and protective eyewear during all procedures in which splashing of any body fluids is likely to occur. Discard masks after each patient, or sooner if the masks become damp or soiled.
    - Do not wear sandals or open-toed shoes.
    - Cover surfaces that may become contaminated with impervious-backed paper, aluminum foil or plastic wrap. Remove these coverings (while gloved), discarded them and replace them between patients (after removing gloves).
    - The patient must wear a clean patient napkin when he/she goes to the Evaluation Station.
    - Patients must wear protective eyewear during all clinical procedures and are required to bring protective eyewear with them to the Evaluation Station for use during the evaluation of clinical procedures.
2. Sterilization and Disinfection
    - **Instruments that become contaminated must be placed in an appropriate receptacle and identified as contaminated.**

- Any instrument that penetrates soft or hard tissue shall be disposed of or sterilized before and after each use. Instruments that do not penetrate hard or soft tissues but do come in contact with oral tissues shall be single-use disposable items and must be properly discarded.
- If not barrier wrapped, surfaces and counter tops shall be pre-cleaned and disinfected with a site-approved tuberculocidal hospital-level disinfectant.
- Handpieces, prophy angles and air/water syringes shall be sterilized before and after use or properly disposed of after use.
- Used sharps are to be placed in a spill-proof, puncture-resistant container. Needles are to be recapped with a one-handed method or with special devices designed to prevent needle-stick injuries and disposed of properly.
- All waste and disposable items shall be considered potentially infectious and shall be disposed of in accordance with federal, state and local regulations.
- Resuscitation equipment (sterilizable or disposable), pocket masks, resuscitation bags or other ventilation devices will be provided by the school in strategic locations to minimize the need for any emergency mouth-to-mouth contact. Candidates should be familiar with their use.

3. Exposure to bloodborne pathogens

   An exposure incident is defined as contact with blood or other potentially infectious materials (PIMS) through

   - Needle stick, sharp or other percutaneous exposure
   - Non-intact skin exposure, such as an open cut, burn or abrasion
   - Contact with a mucous membrane (e.g., inside nose, eye or mouth)

   Since maximum benefit of therapy is most likely to occur with prompt treatment, the following policy has been established:

   - Immediately following the exposure incident, puncture wounds or other percutaneous exposures should be cleaned with soap and water. Mucous membrane exposed to blood or other PIMS should be extensively rinsed with water or sterile saline.
   - All percutaneous exposures and other exposures to blood and PIMS should be reported immediately to the Chief Examiner and the person in authority at the examination site so that appropriate measures can be initiated and the exposure incident documented.
   - If possible, post-exposure prophylactic treatment should be initiated at the examination site if appropriate, as determined by the U.S. Department of Health and Human Services recommendations, or an appropriate referral should be made.

   At the completion of all clinical examinations performed in operatories, it is the responsibility of candidates to clean the operatory thoroughly utilizing accepted infection control procedures.

The ADEX Dental Examination Series

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IV. Registration Procedures

Registration Procedures

Questions pertaining to administrative procedures, financial matters and registration requirements or procedures should be emailed to director@nerb.org.

Registration Deadlines

Current Registration deadlines are listed on NERB's website. Click the *Exam Info* drop-down list, and then select *Dental Exam Calendar*.

Fees

Current exam fees are listed on NERB's website. Click the *Exam Info* drop-down list, and then select *Exam Fee*.

Note: NERB charges a late fee for candidates who register after the registration deadline but before the site is scheduled. Scheduling typically occurs 3 to 4 weeks before an examination. Once scheduling is complete, candidates can no longer be added to an examination. Adding of candidates late is at NERB's discretion and on a space available basis. Candidates are strongly encouraged to register and pay for all examinations before the published deadline date.

Refunds

A request for a fee refund must be submitted in writing and **received by NERB on or before the published registration deadline date** for the examination for which the fee was submitted. Requests received after the published registration deadline date shall not be granted. The deadline date for the DSE **retake** registration is the date the **retake** registration is received. Requests for refund are not granted after the date the DSE **retake** registration is received.

Failure to appear for any section of the ADEX Dental Examination Series results in forfeiture of the entire examination fee. A refund or partial refund will not be granted for any reason.

Fee Deferral

Under extenuating circumstances, a written request for the fee to be deferred to another examination date will be considered on an individual basis when received no later than 30 days after the scheduled examination date. Requests **must** be made in writing to NERB and **must** include original documentation in support of the request. Notification will be sent immediately after a determination is made by NERB. Should a fee deferral be granted, the terms and conditions for future examinations as set by NERB will be provided.

Requests for fee deferral received more than 30 days after the date of the scheduled examination(s) will **not** be honored, and the fee will be forfeited.

Administrative Fees

A non-refundable administrative processing fee of $100 is applicable for handling fee deferrals or other administrative changes.

Professional Liability Insurance

Insurance in the amount of $1 million/$3 million is required. During calendar years 2012 and 2013, **complimentary** professional liability coverage will be provided for candidates and auxiliaries by CNA, through the Professional Protector Plan administered by Brown and Brown, Inc., of Tampa, Florida, in cooperation with the North East Regional Board of Dental Examiners, Inc. The limit amount of $1 million/$3 million will apply. To facilitate this consideration, NERB will forward to Brown and Brown, Inc., agents for CNA, the names, addresses and telephone numbers of all applicants for the ADEX Dental Examination Series during calendar years 2012 and 2013.

Site Selection

Prosthodontics, Endodontics, Restorative and Periodontal Clinical Examination Sections:

When applying online, applicants must indicate the site at which they wish to participate in the manikin-based and patient-based procedures. Applicants from the school at which the examination is administered receive priority. Other applicants will be accepted on a first-come, first-served basis.

Schools designated as closed sites accept only students or graduates of their school.

Candidates who did not attend the school serving as their test site are encouraged to visit the site prior to the time of the examination. **It is the responsibility of the candidate** to make arrangements with the school for the provision of instruments, if required. The school may charge a rental fee for use of instruments, clinic facilities, supplies and disposables. Some sites require that all instruments be supplied by the school. A rental charge or deposit imposed by the facility must be remitted directly to the school. This fee is independent of the NERB examination fee and is **not** collected by NERB.

Diagnostic Skills Examination (DSE) Section

The DSE is administered at Prometric Testing Centers by appointment. The locations of Prometric Testing Centers can be found on the Prometric website: www.2test.com. Once NERB authorizes a candidate to take the examination, he/she will be sent a instructions on how to make an appointment for the examination by phone or online.

Should it be necessary to cancel and/or reschedule the appointment, call the National Prometric Registration Center (800-797-1813). Do not call the local Prometric Testing Center.

Candidates who need to cancel and/or reschedule their appointment must call at least 30 calendar days prior to the test date. Prometric charges a $25 fee for cancellations made between five and 29 days prior to the exam date. Candidates who cancel less than five calendar days prior to the exam or who arrive more than 15 minutes late for their appointment will forfeit their fee.

When scheduling or rescheduling an appointment for the DSE with Prometric, the candidate may request an email from Prometric confirming the examination date and time. Candidates are encouraged to make and retain a copy for future reference.

Candidates who fail the DSE must complete a registration for reexamination before receiving authorization to schedule an appointment with Prometric to retake the exam. All NERB rules for registration procedures apply.

Required Documentation

Social Security Number

Candidates must enter their social security number when applying online. The social security number will be used for identification when scores are transferred to the state dental boards. Incorrect or missing social security numbers may delay licensure.

Identification Card

During the application process, the candidate is required to submit a recent electronic photo of him/herself. The photo will be applied to the candidate's identification card, which he/she will receive on the day of the examination. This ID is to be worn at all times during the examination.

In order to receive the ID card and the rest of the examination materials at orientation, the candidate must provide his/her **Sequential Number, available through his/her online profile (under the Apply Tab) on the NERB online registration website**, along with two forms of personal identification. Both of these additional IDs must contain the candidate's signature, and one must have a recent photograph. Acceptable forms of ID include:

- Driver's license
- Passport
- Military ID
- Employee ID

A national credit card is an acceptable secondary form of ID. **A school ID, expired driver's license or expired passport is not acceptable as a form of ID for this examination.**

The candidate's name on both forms of ID must match exactly the name used for registration. If the name on the identification presented differs from the name used for registration, official documentation or authorization of a name change must be presented for admittance to the examination. If a candidate is not admitted because he/she fails to provide this documentation, his/her examination fee will be forfeited.

Note: An identification card is **not used** for the DSE Section. However, two forms of ID as described above are **required** for admittance to the Prometric Testing Center.

Policies and Rules

Once NERB receives a candidate's registration, the policies described in this Candidate Manual become effective.

Disqualification

A candidate may be disqualified from participating in the examination series by the dean of his/her dental school at any time after certification if the candidate ceases to be a senior student of record or the dean (or designated school official) determines that the candidate is ineligible for any reason. In such cases, fees paid by candidates who are disqualified shall be **forfeited**. A candidate who is disqualified for the remainder of the academic year during the Curriculum Integrated Format shall have access to the Traditional Format in a subsequent academic year, if he/she graduates and presents a diploma. In such a case, the candidate must submit a new registration and appropriate documentation and fees.

A candidate disqualified from an individual examination section by his/her dental school dean (or designated school official) may continue with the other examination sections. However, he/she will need to re-register and submit the appropriate fee and documentation of requalification.

Schedule Changes

The examination assignment schedule is considered final when issued to the candidate. Requests for change will not be considered once the schedule has been distributed.

School personnel do not have the authority to accept a candidate for examination at their site or to make assignment changes within an examination section. Candidates who attempt to make such arrangements with school personnel may be disqualified from the examination and will forfeit examination fees.

The NERB Chief Examiner is the only authorized individual who may consider a request for schedule change. If unusual circumstances warrant such a change and space is available, it is the decision of the chief examiner whether to approve such a request. This decision is made on-site on the day of examination. Prior requests are not accepted or considered.

Online Registration Process

Applying online is a multi-stage process:

1. Go to http://www.nerb.org/apply. Click the *fill out a basic profile* link and complete the form.

   The email address you enter will become your username to login to your profile and will be used to communicate your site assignment and notify you when results are available for release. Double check your email address and choose a secure password.

   After completing the online form, click the *Apply* button.

2. The next page that is displayed is the one you will see each time you login to your profile. The *Dashboard* tab is displayed by default. Here you will find a list of current items and their status:

    Check Mark = completed item

    Exclamation Mark = item requires attention

3. On your *Dashboard* page, you will be prompted to upload a photo. Click the *Upload* link and follow the instructions. A photo is required. **All photos will be reviewed by NERB and may be rejected if they are not found to be acceptable for identification purposes**. Submitting an unacceptable photo will delay your registration.

   - Photos must be in one of the following formats: JPG/JPEG, GIF, or PNG.
   - Photos must be square and have a minimum resolution of 200 x 200 and a maximum resolution of 500 x 500.
   - Your photo must be a front facing headshot in the format that would be used for a passport.

4. After you submit all required profile information and a valid photo, NERB staff will validate your profile, clearing you to register for the examination series.

5. Your graduation status must also be validated before you can register for exams. Verification can take several weeks depending on the method used:

   - Graduating senior at a school in a NERB State:
     - A designated school official may login to the NERB website to verify eligible candidates online.
     - Your school may provide NERB with a list of its graduating class.

- Graduating senior NOT in a NERB State:
    - Upload a scan of the signed *Certification of Completion of Requirements to Graduate Within 45 Days* located in Appendix C. To upload a scan, login to your profile, then click the *Profile* tab followed by the *Proof of Graduation* link at the top of the screen.
- Graduate:
    - Upload a scan of your diploma. To upload a scan, login to your profile, then click the *Profile* tab followed by the *Proof of Graduation* link at the top of the screen.

6. After your profile and graduation status are validated, you will be able to click the link on your *Dashboard* to register for examinations.

7. Submit payment for examination fees. NERB accepts VISA and MasterCard only. Debit cards may be used if allowable by the issuing bank and if they bear the VISA or MasterCard logo. All payments are drawn immediately and must be paid in full. Failure to pay the registration fee at the time of registration may forfeit your ability to sit for the examination. **Registrations that are not paid within 72 hours are automatically cancelled.**

NERB Online Profile Tabs

Dashboard. Under this tab you will find a find a list of items you must submit for your NERB profile and the status of each item.

 Check Mark = completed item

 Exclamation Mark = item requires attention

Apply. Once all profile information has been uploaded and your profile has been verified you may use this tab to apply for examinations. Detailed instructions will be presented based on the available examinations. This tab is also where your clinical assignment will be listed once the site schedule is finalized.

Documents. Candidates must visit this tab prior to the examination to download and possibly fill out any required forms and documents. Instructions about each document will be given.

Profile. Under this tab you can view and edit your personal information and upload your photo, proof of graduation, etc.

Results. Your results will be posted under this tab once they are finalized and released.

The ADEX Dental Examination Series

Curriculum Integrated Format

V. The Examination

The Examination

Testing Schedules

Section I: Computer-based Diagnostic Skills Examination - 1 Day

Initial Offering
This exam section is scheduled by the candidate on a date of his/her choosing, beginning August 4, 2012. However, candidates must successfully complete all five sections of the exam within 18 months of the day on which they begin any section of the exam.

Retest Opportunities: Two
Candidates may retake the section two times and must schedule their own testing appointments.

The ADEX Diagnostic Skills Examination (DSE) Section is given on one day, by appointment, at a Prometric Testing Center. The DSE is approximately 4.25 hours in length.

Sections II and III: Prosthodontics and Endodontics Clinical Examinations – 1 Day

Initial Offering: August-October 2012
The initial offering of the Prosthodontics and Endodontics Clinical Examinations Sections is administered at the candidate's own school on a specified date agreed to by NERB and the dean of the dental school.

Retest Opportunities: Two

First Possible Retest Date: December 2012
Candidates who fail the initial offering of the Prosthodontics and Endodontics Clinical Examination Sections may retake these sections at a regional site (location to be announced).

Examination Schedule:
Candidates will be informed of the date on which they are to retake the Prosthodontics and Endodontics Clinical Examination Sections two to three weeks in advance of the examination date. In some cases, these exam sections may be administered on a number of different days at a specific examination site. In such cases, candidates may be assigned to groups to indicate the day on which they are to participate in the examination.

FIRST DAY

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the exam	Orientation (Contact School Coordinator for site and time)
Group D	7:00 a.m. to 7:15 a.m. 7:15 a.m. to 7:30 a.m. 7:30 a.m.. to 8:30 a.m. 8:30 a.m. to 11:30 a.m. 11:30 a.m. to 3:30 p.m. 3:30 p.m. 3:45 p.m.	Arrive Pick up typodonts Set-up, check-in Endodontics Examination Section Prosthodontics Examination Section Stop treatment Line up for check-out

SECOND DAY (if necessary)

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the first exam day	Orientation (Contact School Coordinator for site and time)
Group A	7:00 a.m. to 7:15 a.m. 7:15 a.m. to 7:30 a.m. 7:30 a.m. to 8:30 a.m. 8:30 a.m. to 11:30 a.m. 11:30 a.m. to 3:30 p.m. 3:30 p.m. 3:45 p.m.	Arrive Pick up typodonts Set-up, check-in Endodontics Examination Prosthodontic Examination Stop treatment Line up for check-out

Sections IV and V: Periodontal and Restorative Clinical Examinations – 1 Day

Initial Offering: February-March 2013
The initial offering of the Periodontal and Restorative Clinical Examination Sections is at the candidate's own school on a specified date agreed to by NERB and the dean of the dental school.

Retest Opportunities: Two

First Possible Retest Date: April-May 2013
Candidates who fail the initial offering of the Periodontal and Restorative Examination Sections may retake these sections at a regional site (dates and locations available on the NERB website). Candidates will be informed at least two to three weeks in advance of the dates on which they are to retake the Periodontal and Restorative Examination Sections.

Examination Schedule:
On the assigned testing date, half of the candidates will be assigned to start the Periodontal Section first, and half will be assigned to start the Restorative Section first. The candidate must begin the examination by performing the assigned procedure. After completing the procedure to which he/she was assigned first, the candidate may complete all other required procedures in whichever order he/she wishes. Specifically, candidates scheduled to perform the periodontal procedure first may, upon completion of the periodontal procedure, perform the two restorative procedures in the order of the candidate's choice. Candidates scheduled to perform the restorative examination first may perform the two restorative procedures consecutively, or may perform the periodontal exercise between the two restorative procedures.

In the event that a candidate is scheduled to perform a restorative procedure first and does not receive approval of the first lesion submitted for one of the two restorative procedures, that candidate may, in any order, select an alternative lesion for the same procedure, select a lesion for the other restorative

procedure or perform the periodontal procedure, as long as all procedures are completed by the 5:00 p.m. stop time for the examinations.

FIRST DAY

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the exam	Orientation (Contact School Coordinator for site and time)
Group A Periodontal procedure first	6:30 a.m. to 7:00 a.m. 7:00 a.m. to 8:00 a.m. 8:00 a.m.	Set-up CFE checks Health History, Patient Consent Form, *anesthetic record* on Progress Form, patient's blood pressure. Submit patient to Evaluation Station for case acceptance.
Group B Restorative procedure first	6:30 a.m. to 7:00 a.m. 7:00 a.m. to 8:00 a.m. 8:00 a.m.	Set-up CFE checks Health History, Patient Consent Form, *anesthetic record* on Progress Form, patient's blood pressure. Candidate submits patient to Evaluation station for case acceptance. Begin Restorative Procedure.

(continued on next page)

SECOND DAY (if necessary)

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the first exam day	Orientation (Contact School Coordinator for site and time)
Group C Periodontal procedure first	6:30 a.m. to 7:00 a.m. 7:00 a.m. to 8:00 a.m. 8:00 a.m.	Set-up CFE checks Health History, Patient Consent Form, *anesthetic record* on Progress Form, patient's blood pressure. Submit patient to Evaluation Station for case acceptance.
Group D Restorative procedure first	6:30 a.m. to 7:00 a.m. 7:00 a.m. to 8:00 a.m. 8:00 a.m.	Set-up CFE checks Health History, Patient Consent Form, *anesthetic record* on Progress Form, patient's blood pressure. Candidate submits patient to Evaluation station for case acceptance. Begin Restorative Procedure.

April-May Retest Opportunity: Sections II through V – 1 or 2 days

The April-May testing round is held specifically for candidates unsuccessful in previous attempts at Sections II through V of the examination.

This round is the second retest opportunity for Sections II and III (Prosthodontics and Endodontics) and the first retest opportunity for Sections IV and V (Periodontal and Restorative).

The examination will be offered at regional sites (locations to be announced). Candidates may retake up to four sections of the examination over the course of a two-day testing period.

FIRST DAY

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the exam	Orientation (Contact School Coordinator for site and time)
Group A	8:00 a.m. to 11:00 a.m.	Periodontal Clinical Examination
Group A	11:00 a.m. to 5:00 p.m.	Restorative Clinical Examination
Group B	8:00 a.m. to 2:00 p.m.	Restorative Clinical Examination
Group B	2:00 p.m. to 5:00 p.m.	Periodontal Clinical Examination
Group C and Group D	7:30 a.m. to 8:30 a.m. 8:30 a.m. to 11:30 a.m. 3:30 p.m. to 3:45 p.m.	Set-up, check-in Endodontics Examination Prosthodontic Examination Turn in typodonts

SECOND DAY

CANDIDATES	TIME	ASSIGNMENT
All Candidates	On the day prior to the first exam day	Orientation (Contact School Coordinator for site and time)
Group A and Group B	7:30 a.m. to 8:30 a.m. 8:30 a.m. to 11:30 a.m. 11:30 a.m. to 3:30 p.m. 3:30 p.m. to 3:45 p.m.	Set-up, check-in Endodontics Examination Prosthodontic Examination Turn in typodonts
Group C	8:00 a.m. to 11:00 a.m.	Periodontal Clinical Examination
Group C	11:00 a.m. to 5:00 p.m.	Restorative Clinical Examination
Group D	8:00 a.m. to 2:00 p.m.	Restorative Clinical Examination
Group D	2:00 p.m. to 5:00 p.m.	Periodontal Clinical Examination

Admission and Orientation

Admission and orientation take place the afternoon prior to the examination day. All candidates are strongly encouraged to attend. **Those who do not attend may not be permitted to begin the examination on the following day.** During orientation, specific instructions will be provided along with the materials necessary to take the examination. The candidate must present his/her NERB-issued photo ID card along with two other forms of identification, both with the candidate's signature and one with a recent photograph. Candidates who do not have the required ID card and photo identification will **not receive** the examination materials during the orientation and will not be admitted to the examination.

Time Management

In scheduling patients and planning the utilization of time, the candidate should be aware that the time allowed for the **examination includes the time during which the patient(s) will be at the Evaluation Station for assignment and evaluation.** The minimum time patients will be in the Evaluation Station is 30 minutes – possibly longer, depending on the time of day. Times may vary according to the procedure being evaluated, the testing site and the number of candidates.

Additionally, when a candidate submits a Modification Request, his/her patient must be sent to the Express Chair in the Evaluation Station. Candidates are allowed to submit multiple requests for modification simultaneously in order to save time.

Section I: Diagnostic Skills Examination (DSE) – 100 Points

The ADEX Diagnostic Skills Examination (DSE) Section is a multiple-choice computerized examination.

It is divided into three subsections, each designed to assess more complex levels of diagnosis and treatment planning knowledge, skills and abilities.

1. The PE Subsection (Patient Evaluation) is designed to assess the candidate's abilities to recognize critical clinical conditions or situations encountered regularly in the general practice of dentistry.
2. The CTP Subsection (Comprehensive Treatment Planning) is designed to assess the candidate's abilities to recognize critical clinical conditions or situations encountered regularly in the general practice of dentistry, and also to identify the appropriate treatment options required for the clinical condition or situation depicted in simulations.
3. The PPMC Subsection (Periodontics, Prosthodontics and Medical Considerations) is designed to assess the candidate's abilities to recognize critical clinical conditions or situations encountered regularly in the general practice of dentistry and to formulate appropriate treatment options in a more integrated fashion than in the CTP Subsection.

Simulations of actual patients are utilized through computer-enhanced photographs, radiographs, optical images of study and working models, laboratory data and other clinical digitized reproductions. The ADEX DSE is a computerized objective simulated clinical examination (OSCE).

There are 30 items in the PE Subsection, 60 items in the CTP Subsection and 60 items in the PPMC Subsection. Pilot items (i.e., questions that are being tested for use in future versions of the examination) may be added but do not affect the score. Appropriate additional time is provided for these items.

In each subsection, the candidate may skip or mark items to be considered later. **Once a subsection is completed, the candidate must lock out of the subsection and will not be able to return to that subsection again.** The time indicated on the computer screen is the amount of time for that subsection. There is no specific time limitation for each item.

The DSE Section is administered by appointment at Prometric Testing Centers after the candidate receives authorization from NERB. Approximately four hours are allotted for this examination section. No study materials may be brought to the Prometric Testing Center, and recording of test items is prohibited. Violation of these rules may result in failure of the examination.

NERB will provide information about Prometric Testing Centers along with the candidate's authorization to schedule his/her appointment for the DSE Section. This will include includes information on appointment scheduling, arriving at the center and material required. Candidates must follow the rules for conduct of the examination as established by Prometric.

DSE Test Construction

The test construction maximizes input from across the United States and avoids emphasis on any concept or procedure that may have limited applicability. The ADEX Examination Committee, which is responsible for test development, consists of equal numbers of examiners and educators. In addition, special consultants review the examination before it is finalized. Because of the broad-based approach to test development, no single textbook or publication can be used as a reference. Every effort is made to ensure that the examination is based on concepts taught and accepted by educational institutions accredited by the American Dental Association or Canadian Commissions on Dental Accreditation. Any current textbook relevant to the subject matter of the examination utilized in such institutions should be suitable as a study reference.

Section II: Endodontics Clinical Examination– 100 Points
Section III: Fixed Prosthodontics Clinical Examination – 100 Points

The Endodontics and Fixed Prosthodontics Clinical Examination Sections consist of five manikin-based procedures performed on the same day.

Section II: Endodontics Clinical Examination – 100 points

CONTENT	FORMAT
1. Access opening on a first molar 2. Access opening, canal instrumentation and obturation (tooth #8)	Performed on a manikin Time: 3 hours

Section III: Fixed Prosthodontics Clinical Examination – 100 points

CONTENT	FORMAT
1. Preparation – PFM crown as one 3-unit bridge abutment on a first bicuspid 2. Preparation – Full cast crown on a first molar as the other abutment for the same 3-unit bridge 3. Preparation – Ceramic crown (tooth #9)	erformed on a manikin Time: 4.25 hours

Both exam sections are administered together on the same manikin head. **All procedures will be performed as if the manikin were a live patient. The manikin head and facial shroud must be maintained in an acceptable operating position, and the candidate must follow all appropriate infection control procedures.**

The Prosthodontics and Endodontics Examinations begin at 8:30 A.M. on the assigned day. Candidates can begin setting up their units as early as 7:00 AM. Candidates must present their photo ID card as well as two other forms of identification, both with the candidate's signature and one with a recent photo plus their white envelope to receive the typodont box. Between 7:30 to 8:30 A.M. the Clinic Floor Examiner (CFE) must verify that the tooth for the endodontic instrumentation and obturation has been measured and secured in the typodont, the manikin head is properly assembled, and any defective equipment or materials identified and corrected or replaced. At 8:30 A.M. treatment begins for all candidates. There is no extension of time due to starting treatment after 8:30 A.M. Teeth may not be removed or disassembled from the typodont or manikin head without permission from a CFE. Candidates may work only on Endodontics procedures from 8:30 AM until 11:30 AM and only on Prosthodontics procedures from 11:30 AM until 3:30 PM. All treatment must stop at 3:30 P.M. The candidate along with the typodont and properly completed Progress form, must be in line at the collection station no later than 3:45 P.M. The endodontically treated tooth must be in place in the typodont. If the candidate is retaking only the Endodontics Examination he or she will have 3 hours for treatment and if retaking the Prosthodontics Examination, will have 4 hours for treatment. An overview of the testing schedule is shown below:

Overview of the Prosthodontic and Endodontic Testing Schedule

TIME	ACTIVITY
7:00 a.m.	Candidates may begin setting up their operatory units. At this time, candidates must present their photo ID card (issued by NERB) and two additional forms of identification, both with the candidate's signature and one with a photo. Candidates will receive a typodont for use during the procedures. After receiving the typodont, candidates must measure the tooth for use in the Endodontics Section and secure it in the typodont, affix the typodont to the manikin-head and test all equipment and materials to ensure proper functioning.
7:30 a.m.	A clinic floor examiner (CFE) will examine the candidate's typodont and manikin to ensure proper set-up and ensure any defective equipment or materials are repaired or replaced.
8:30 a.m.	Treatment begins. Candidates have up to three hours to complete the Endodontics Section but may begin the Prosthodontics Section early with permission from a CFE. Candidates have up to four hours to complete the Prosthodontics Section.
3:30 p.m.	Treatment stops.
3:45 p.m.	Candidates must line up at the Examination Station for check-out. Bring typodont and properly completed Progress Form to check-out.

Set-Up Time

Between 7:30 and 8:30 a.m., candidates may set up equipment, perform initial endodontic measurements and notify the clinic floor examiner of any defective equipment. If a candidate believes the typodont he/she was issued or certain teeth in the typodont may have preexisting defects, he/she must immediately notify a CFE. Prior to beginning treatment at 8:30 a.m., the candidate must check manikin teeth and advise the CFE of loose or defective teeth. A CFE will tighten any loose teeth and initial the Progress Form.

During set-up time, the candidate must measure the length of the tooth and record the measurement, in millimeters, on the Progress Form.

During this time, the candidate may prepare and fabricate an occlusal index without the use of gloves; however, no other examination procedures are allowed during set-up time. The manikin teeth may not be altered or marked, nor may impressions be taken prior to the typodont being mounted in the manikin head at 8:30 a.m.

Typodonts and manikins. Only typodonts and teeth supplied by NERB may be used for the examination. Providing acceptable manikin heads with shrouds and chair mounts are the responsibility of the candidate, although these items are typically available through the host school. Contact the host school to confirm the availability of testing materials.

There will be two different brands of typodonts utilized, depending the examination site. However, the grading criteria will be identical for both brands. Columbia typodonts (M-PVR-860 NERB) will be used at most sites this year but at a few the Acadental ModuPRO typodont (MP_R220_N) will be used. You should contact the school coordinator to determine which type will be utilized at your exam site.

When unpacking the typodont, all packing material should be saved and used in repacking the typodont for shipment following the examination. **The box and packing materials must not be discarded.**

The manikin head with the typodont in place must be chair mounted. The manikin head may not be

disassembled or removed from the dental chair for any reason without prior permission of a CFE. If any problems with the typodont arise during the examination, a CFE must be notified immediately for resolution of the problem.

Procedures

The Endodontics Examination Section (limited to three hours – 8:30 to 11:30 a.m.) is followed by the Prosthodontics Examination Section (limited to four hours). However, if a candidate finishes the Endodontics Section early, he/she may proceed to the Prosthodontics Section without waiting but will only be allowed the standard four hours for this section. In any case, before proceeding to the Prosthodontic Section a CFE must be called to check the completion of the two Endodontic procedures.

Endodontics Examination Section

1. Endodontic access opening and canal identification only, on tooth #3 at schools using the Columbia typodont or on tooth #14 at schools using the Acadental typodont
2. Endodontic access, canal instrumentation and obturation on tooth #8

Fixed Prosthodontic Examination Section

3. Preparation for a porcelain-fused-to-metal crown as one abutment for a 3-unit bridge on tooth #21 at schools using the Columbia typodont or on tooth #5 at schools using the Acadental typodont. (Although the bridge is not fabricated for this examination, the preparations are evaluated for proper alignment if a bridge were to be placed.)
4. Preparation for a cast metal crown as the other abutment for the same 3-unit bridge on tooth #19 at schools using the Columbia typodont or on tooth #3 at schools using the Acadental typodont. Both preparations must be in alignment to accept a bridge.
5. Preparation for a porcelain/ceramic crown on tooth #9

Air/Water spray. The Candidate **should** use only air, but **may** use both air and water spray when preparing the teeth. If water spray is utilized, a mechanism to collect and remove the water must be in place during the use of the water spray.

Patient simulation. The correct patient/operator position must be maintained while operating. Throughout the manikin procedures, the treatment process will be observed by CFEs and evaluated as if the manikin were a patient. Manikins are not required to wear protective eyewear but are subject to the same treatment standards as a patient. The facial shroud may not be displaced other than with those retracting methods that would be reasonable for a patient's facial tissue.

Infection control. The candidate must follow the most current recommended infection control procedures as published by the CDC during all manikin clinical procedures. The only exception to standard infection control precautions is that the candidate is not required to maintain protective eyewear on the manikin during manikin procedures. Infection control will be monitored by the CFEs. As both the Endodontics and Prosthodontics procedures are considered to be on the same patient, it is not necessary to sanitize the operatory or sterilize instruments between these procedures.

Assigned teeth. Only the assigned teeth may be treated. If the candidate begins a procedure on the wrong tooth, he/she **must** notify the CFE.

Check-out Process

The Endodontics Section must be completed by 11:30 a.m., the Prosthodontics Section must be completed at 3:30 p.m. and the candidate must turn in the typodont and Progress Form between 3:30 and 3:45 p.m. Candidates who finish the Endodontics Section early may proceed to the Prosthodontics Section without waiting; however, the four-hour time limit for the Prosthodontics Section will still apply.

Upon completion of all sections of the Endodontics and/or Fixed Prosthodontics Clinical Examination Sections, the candidate must notify a CFE for permission to disassemble the manikin head mounting. When the candidate turns in the typodont, the CFE will check to see that the three crown preparations are in place and the two endodontically treated teeth are present. The CFE will affix a candidate identification label on the upper member of the typodont and repackage it in its original box.

Security requirements. No written materials may be in the operating area other than a copy of the Candidate Manual or parts thereof, notes written on these copies and NERB forms.

Assistants. Auxiliary personnel are **not** permitted to assist at chairside or in a laboratory during the manikin-based examination sections. Candidates may not assist each other or critique or discuss one another's work.

Procedures Specific to the Endodontics Examination Section

During the Endodontics Examination Section, the candidate will perform

1. An access opening on a posterior tooth (#3 on Columbia typodont or #14 on Acadental typodont). Candidates must achieve direct access to all three canals.
2. An access opening, canal instrumentation and obturation on an anterior tooth (#8). Tooth #8 is considered to have a normal size pulp chamber for a 21 year old. The size, shape and extent of the prepared access opening should reflect such anatomy and will be graded accordingly. Canal instrumentation to a size 50-55 will be required prior to obturation.

Radiographs. Since the tooth length is directly measured prior to the procedure, no radiographs are utilized before or after treatment.

Isolation dam. The use of an isolation dam is required for each endodontic procedure (two isolation dams, one for each tooth treated). **An isolation dam clamp should not be placed on tooth #3 (#14) or #8, as doing so may cause the crown to separate from the root of these manikin teeth.** Clamping of adjacent teeth or ligation is acceptable. All treatment must be done with the dam in place.

Instruments. Other than the instruments and materials provided by the testing site, the candidates are responsible for providing the instruments, files and materials of their choice. Rotary instruments are permissible during the Endodontics Section.

Prohibited treatments. On the anterior tooth, the use of warm gutta-percha or carrier-based, thermoplasticized gutta-percha techniques should not be used, as they may cause damage to the plastic endodontic tooth. If the anterior endodontic tooth fractures during filling, the treatment should be completed. If the crown fractures during treatment, contact the CFE immediately.

Reference point. The cemento-enamel junction (CEJ) on the facial surface should be used as the reference point to determine the fill depth in the pulp chamber.

Filling material. No temporary filling material, cotton pellet or restorative material should be placed in the pulp chamber.

Procedures Specific to the Fixed Prosthodontics Examintion Section

During the Fixed Prosthodontics Examination Section, the candidate will perform

1. Preparation for a PFM crown as one 3-unit bridge abutment (#21 on Columbia and #5 on Acadental)
2. Preparation for a full cast crown (#19 on Columbia and #3 on Acadental) as the other abutment for the same 3-unit bridge – both preps must be parallel
3. Preparation for a ceramic crown (#9 on both kinds of typodonts)

Prohibited materials. Impressions, registration, overlays, stents, clear plastic shells, models or pre-preparations are not permitted to be brought to the examination site**. Failure to follow these requirements will result in confiscation of the materials as well as dismissal from and failure of the examination.**

Isolation dam. No isolation dam is required for the crown preparations.

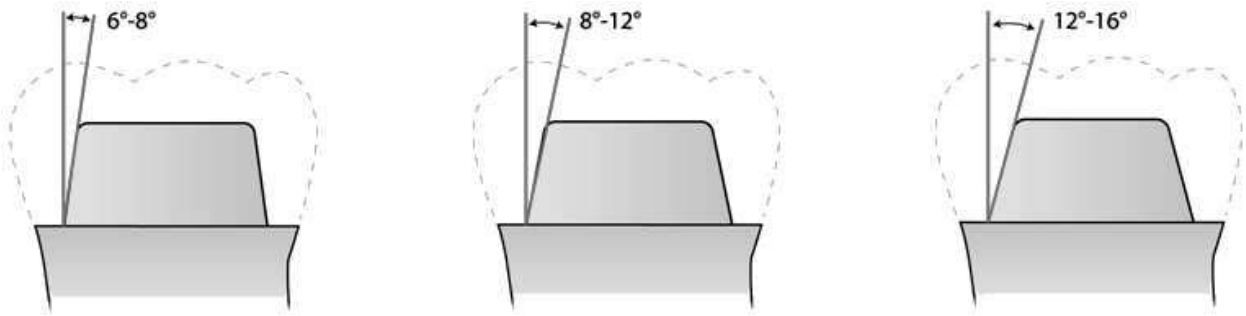
Margins. If the simulated gingival margin is recessed below the CEJ, prepare the margins to within 0.5 mm of the CEJ. The lingual margin for the porcelain-fused-to-metal crown should be prepared for a metal margin, 0.5 mm.

The lingual margin on the porcelain-fused-to-metal crown preparation should be prepared to receive a metal margin. The transition from the facial shoulder to the lingual margin should begin to occur at the interproximal-buccal line angles.

Occlusal reduction. The tooth for the porcelain-fused-to-metal crown should be prepared for a porcelain occlusal surface with an optimal occlusal reduction of 2 mm. For the full cast gold crown preparation, the occlusal reduction is optimally 1.5 mm.

Equilibration prohibited. No equilibration will be permitted on the typodont prior to or subsequent to any crown preparation.

Taper. To taper is defined as to gradually become more narrow in one direction. For the purposes of this examination the requirements for tapering are illustrated below:



Satisfactory | Minimally Acceptable | Marginally Substandard

Note: Candidates who finish the Endodontics Section early may proceed to the Prosthodontics Section without waiting; however, the four-hour time limit for the Prosthodontics Section will still apply. Candidates must notify the CFE if they finish the Endodontics Section early and wish to begin the Prosthodontics Section; the CFE will note the start-time and finish-time on the candidate's Progress Form.

Before turning in his/her typodont at the end of the examination, each candidate must be sure it is clear of all dust and debris.

SCORING CRITERIA: ANTERIOR ENDODONTIC PROCEDURE
Access Opening

SATISFACTORY

1. The size and placement of the access opening reflects the position of the pulp chamber and allows for complete debridement of the pulp chamber and straight-line access to the root canal system.
2. The access opening is in the middle third of the lingual surface mesiodistally and incisogingivally.
3. From the lingual surface to the cervical portion, the internal form tapers to the canal opening with no ledges.
4. All pulp horns are removed through the access opening.
5. There is no reduction of the crown.

MINIMALLY ACCEPTABLE

1. The size and placement of the access opening is not directly over the pulp chamber but allows for debridement of the pulp chamber and straight-line access to the root canal system.
2. The size and placement of the access opening is not consistent with *Satisfactory*-level criteria but is not less than one-fourth nor greater than one-half of the lingual surface and does not weaken the marginal ridges or incisal edge.
3. From the lingual surface to the cervical portion, the internal form tapers to the canal opening with slight ledges.
4. Pulp horns are not fully removed through the access opening.

MARGINALLY SUBSTANDARD

1. The size and placement of the access opening is not over the pulp chamber and hinders complete debridement of the pulp chamber or does not allow straight-line access to the root canal system.
2. The access opening is less than one-fourth or greater than one-half the width of the lingual surface, or the access opening weakens the marginal ridge(s). The access encroaches on, but does not include, the incisal edge.
3. The internal form lacks taper to the canal orifice(s); gouges are present that do not affect access to the canal orifice.
4. Pulp horns are not entered.

CRITICAL DEFICIENCY

1. The size and placement of the access opening is not over the pulp chamber and does not allow complete debridement of the pulp chamber or access to the root canal system.
2. The access opening includes the marginal ridge(s) and/or the incisal edge. The access opening is so small that debridement of the pulp chamber is impossible. The canal orifice is not accessed. The anterior crown is fractured due to excessive access preparation.
3. The internal form exhibits excessive ledging or gouges that do not allow access to the canal orifices.
4. There is a perforation of the crown or the floor of the pulp chamber.
5. Reduction of the crown has been performed.

SCORING CRITERIA: ANTERIOR ENDODONTIC PROCEDURE
Canal Instrumentation

SATISFACTORY

1. The cervical portion of the canal is enlarged faciolingually and mesiodistally to allow access to the apical portion of the canal.
2. The mid-root portion of the canal blends with the cervical portion, and no ledges or shoulders are present.
3. The apical portion is instrumented to within 0.5 to 1 mm of the anatomical apex.

MINIMALLY ACCEPTABLE

1. The cervical portion of the canal is too small and makes access to the apical portion of the canal difficult.
2. The mid-root portion of the canal does not blend smoothly with the cervical portion, but no ledges or shoulders exist.
3. The apical portion of the canal is prepared to the anatomical apex, or the apical portion of the canal is prepared more than 1 mm but less than 2 mm short of the anatomical apex.

MARGINALLY SUBSTANDARD

1. In the cervical portion, the canal is over- or under-prepared.
2. The mid-root portion of the canal does not blend with the cervical region of the canal, and/or ledging or shoulders are present that will inhibit canal obturation.
3. The apical portion of the canal is under-prepared 2 mm to 3 mm short of the anatomical apex.
4. The mid-root or apical portion of the canal is transported, but the apical portion still blends with the anatomical apex.

CRITICAL DEFICIENCY

1. The cervical portion of the canal is grossly over-prepared and/or perforated.
2. The mid-root portion of the canal is perforated and/or has gross shoulders or ledges that will prevent canal obturation.
3. The apical portion of the canal is over-prepared and instrumented beyond the anatomical apex or is under-prepared more than 3 mm from the anatomical apex.
4. The apical portion of the canal is transported and there is a perforation of the root.
5. The root is fractured during root canal instrumentation.

SCORING CRITERIA: ANTERIOR ENDODONTIC PROCEDURE
Root Canal Obturation

SATISFACTORY

1. The root canal is obturated with gutta percha 1 mm or less from the apical foramen.
2. There is less than mm of sealer extruded beyond the apical foramen.
3. There are no voids in the gutta percha from the CEJ to the apical foramen.
4. There is no gutta percha, restorative material or sealer in the pulp chamber.
5. There is no evidence of a separated file.

MINIMALLY ACCEPTABLE

1. The root canal is obturated with gutta percha 1.5 mm from the apical foramen or up to 0.5 mm beyond the apical foramen.
2. There is more than 1 mm of sealer extruded beyond the apical foramen.
3. The apical third of the gutta percha in the root canal is dense and without voids.
4. The gutta percha in the root canal is 1 mm to 2 mm short of the CEJ.
5. Gutta percha and/or sealer is evident in the pulp chamber extending up to 1 mm above the CEJ.
6. A file is separated in the root canal but does not prevent the obturation of the root canal.

MARGINALLY SUBSTANDARD

1. The root canal is obturated with gutta percha more than 1.5 mm but no more than 3 mm short of the apical foramen. The root canal is obturated with gutta percha greater than 0.5 mm but no more than 1.5 mm beyond the apical foramen.
2. There are significant voids throughout the obturation of the root canal.
3. The gutta percha in the root canal is more than 2 mm but less than 3 mm short of the CEJ.
4. Gutta percha and/or sealer is evident in the pulp chamber extending more than 1 mm but no more than 2 mm above the CEJ.
5. A file is separated in the root canal but allows obturation of the root canal, which is marginally substandard.

CRITICAL DEFICIENCY

1. The root canal is obturated with gutta percha more than 3 mm short of the apical foramen. The root canal is obturated with gutta percha greater than 1.5 mm beyond the apical foramen.
2. There are large voids throughout the obturation of the root canal, there is no gutta percha present in the root canal or a material other than gutta percha was used to obturate the canal.
3. The gutta percha in the root canal is more than 3 mm short of the CEJ.
4. Gutta percha and/or sealer is evident in the pulp chamber extending more than 2 mm above the CEJ.
5. A file is separated in the root canal and prevents the obturation of the root canal, which is critically deficient.
6. There is restorative material present in the pulp chamber.
7. The root is fractured during root canal obturation.

SCORING CRITERIA: POSTERIOR ENDONDONTIC PROCEDURE
Access Opening ONLY

SATISFACTORY

1. The placement of the access opening reflects the position of the pulp chamber and allows for complete debridement of the pulp chamber or straight-line access to the root canal system.
2. The access opening is of optimal size (confined to the mesial triangular pit and central fossa of the tooth, up to but not including the mesiobuccal cusp tip so that the marginal ridge, oblique ridge and all other cusps are supported by dentin) and allows for complete debridement of the pulp chamber without ledges remaining.
3. The internal form tapers to the canal opening with no ledges.
4. All pulp horns are removed through the access opening.
5. There is no reduction of the crown.

MINIMALLY ACCEPTABLE

1. The placement of the access opening is not directly over the pulp chamber but allows for debridement of the pulp chamber and straight-line access to the root canal system.
2. The access opening is in the mesial triangular pit and central fossa of the tooth but infringes on the mesial marginal ridge, leaving less than 3 mm but not less than 2 mm; the opening infringes on the oblique ridge, leaving not less than 1 mm thickness. The access opening is over-extended up to 1 mm short of the mesiolingual and/or distobuccal cusp tips. The access opening is over-extended to include the mesiobuccal cusp tip but does not extend beyond the occlusal table. The access opening allows for complete debridement of the pulp chamber, and the cusps and/or marginal ridges have dentinal support.
3. The internal form tapers to the canal opening with slight ledges.
4. Pulp horns are not fully removed through the access opening.

MARGINALLY SUBSTANDARD

1. The placement of the access opening is not over the pulp chamber and hinders complete debridement of the pulp chamber or does not allow straight-line access to the root canal system.
2. The access opening is in the mesial triangular pit and central fossa of the tooth but infringes on the mesial marginal ridge leaving less than 2 mm but not less than 1mm. The access opening infringes on the oblique ridge leaving less than 1mm thickness without complete obliteration of the ridge. The access opening is over-extended to include the cusp tips of the mesial lingual and/or distal buccal cusps but does not extend beyond the occlusal table. The access opening is over-extended, including the mesiobuccal cusp tip and extends up to 1 mm beyond the occlusal table. The access is too small, preventing complete debridement of the pulp chamber.
3. The internal form lacks taper to the canal orifice(s); gouges are present that do not affect access to the canal orifices.
4. Pulp horns are not entered.

CRITICAL DEFICIENCY

1. The placement of the access opening is not over the pulp chamber and does not allow complete debridement of the pulp chamber or straight-line access to the root canal system.
2. The access opening extends beyond the mesial triangular pit and central fossa of the tooth and undermines the mesial marginal ridge leaving less than 1 mm thickness; the opening undermines and/or completely obliterates the oblique ridge. The access opening is over-extended to include the cusp tips of the mesiolingual and/or distobuccal cusps and extends beyond the occlusal table. The access opening is over-extended to include the mesiobuccal cusp tip and extends greater than 1 mm beyond the occlusal table. The access opening is under-extended so that debridement of the pulp chamber is impossible or one or more canal orifices are not accessed.
3. The pulp chamber not entered.
4. The internal form exhibits excessive ledging or gouges that do not allow access to the canal orifices and/or perforation.
5. Reduction of the crown has been performed.

SCORING CRITERIA: ENDODONTIC MANIKIN PROCEDURES
Treatment Management

SATISFACTORY

1. The adjacent teeth and/or restorations are free from damage.
2. The simulated gingiva and/or typodont is/are free from damage.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
2. There is slight damage to simulated gingiva and/or typodont consistent with the procedure.

MARGINALLY SUBSTANDARD

1. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact.
2. There is iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration.
2. There is gross iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

SCORING CRITERIA: PORCELAIN-FUSED-TO-METAL CROWN PREPARATION
Cervical Margin and Draw

SATISFACTORY

1. The margins should be 0.5 mm occlusal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is smooth, continuous and well defined.
3. The cervical bevel, when used, is 0.5 to 1 mm in width and is well defined.
4. The appropriate path of insertion varies less than 10° from parallel to the long axis of the tooth on all axial surfaces, and a line of draw is established.

MINIMALLY ACCEPTABLE

1. The cervical margin is at the level of or no more than 1 mm occlusal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is continuous but slightly rough and lacks some definition.
3. The cervical bevel, when used, is greater than 1 mm but does not exceed 1.5 mm, and lacks some definition.
4. The path of insertion/line of draw deviates 10° to less than 20° from the long axis of the tooth.

MARGINALLY SUBSTANDARD

1. The cervical margin is over-extended 0.5 mm below the CEJ or the crest of the simulated free gingival margin, whichever is most occlusal.
2. The cervical margin is under-extended by more than 1 mm but no more than 1.5 mm occlusal to the CEJ or the crest of the simulated free gingival margin, whichever is most occlusal.
3. The cervical margin has some continuity, is significantly rough and is poorly defined.
4. The cervical bevel, when used, is less than 0.5 mm or greater than 1.5 mm but does not exceed 2 mm and has very poor definition.
5. The path of insertion/line of draw deviates 20° to less than 30° from the long axis of the tooth.

CRITICAL DEFICIENCY

1. The cervical margin is over-extended more than 0.5 mm below the simulated free gingival margin, causing visual damage to the typodont.
2. The cervical margin is under-extended by more than 1.5 mm above the simulated free gingival margin or CEJ, whichever is more coronal, and thereby compromises esthetics, resistance and retention form.
3. The cervical margin has no continuity and/or definition.
4. The cervical bevel, when used, has no continuity or is greater than 2 mm and has no definition.
5. The path of insertion/line of draw is grossly unacceptable, deviating 30° or more from the long axis of the tooth.

SCORING CRITERIA: PORCELAIN-FUSED-TO-METAL CROWN PREPARATION
Walls, Taper and Shoulder

SATISFACTORY

1. Axial tissue removal is optimally 1.5 mm to be sufficient for convenience, retention and resistance form.
2. Walls are smooth and well defined, with no undercuts.
3. There is full visual taper (6°– 8°).
4. The facial shoulder is optimally 1.5 mm wide.
5. Reduction of the occlusal wall is optimally 2 mm.
6. Internal line angles and cusp tips are rounded.
7. The general occlusal anatomy is maintained.

MINIMALLY ACCEPTABLE

1. The axial tissue removal deviates no more than $\pm$ 0.5 mm from optimal.
2. The walls are slightly rough and lack some definition.
3. Taper is present, but nearly parallel (<6°) or slightly excessive (= 8° - 12° per wall).
4. The facial shoulder varies slightly in width but deviates no more than ± 0.5 mm from ideal.
5. Occlusal reduction deviates no more than $\pm$ 0.5 mm from optimal.
6. Internal line angles and cusp tip areas are not completely rounded and show a slight tendency of being sharp.

MARGINALLY SUBSTANDARD

1. The axial tissue removal is over-reduced or under-reduced but deviates no more than $\pm$ 1 mm from optimal.
2. The axial walls are rough.
3. There is no taper or excessive taper (= 12° - 16° per wall).
4. The facial shoulder varies slightly in width but deviates no more than ± 1 mm from ideal.
5. Occlusal reduction deviates no more than $\pm$ 1 mm from optimal
6. The internal line angles and cusp tip areas show only minimal evidence of rounding with a greater tendency of being sharp.
7. The occlusal anatomy is flat.

CRITICAL DEFICIENCY

1. The axial tissue removal is grossly over-reduced or under-reduced. The reduction is less than 0.5 mm or greater than 2.5 mm.
2. The taper is grossly over-reduced (>16° per wall).
3. There is an undercut.
4. The facial shoulder is less than 0.5 mm or more than 2.5 mm in width.
5. The occlusal wall is grossly over-reduced (greater than 3 mm, encroaching on the pulp and impacting resistance and retention form) or grossly under-reduced (less than 0.5 mm, resulting in insufficient occlusal clearance for adequate porcelain restorative material).
6. The internal line angles or cusp tip areas are excessively sharp with no evidence of rounding.

SCORING CRITERIA: CAST GOLD CROWN PREPARATION
Cervical Margin and Draw

SATISFACTORY

1. The margins are 0.5 mm occlusal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is smooth, continuous and well defined.
3. The cervical bevel, when used, is 0.5 to 1 mm in width and is well defined.
4. The appropriate path of insertion varies less than 10° from parallel to the long axis of the tooth on all axial surfaces, and a line of draw is established.

MINIMALLY ACCEPTABLE

1. The cervical margin is at the level of or no more than 1mm occlusal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is continuous but slightly rough and lacks some definition.
3. The cervical bevel, when used, is greater than 1 mm but does not exceed 1.5 mm and lacks some definition.
4. The path of insertion/line of draw deviates 10° to less than 20° from the long axis of the tooth.

MARGINALLY SUBSTANDARD

1. The cervical margin is over-extended 0.5 mm below the CEJ or the crest of the simulated free gingival margin, whichever is most occlusal.
2. The cervical margin is under-extended by more than 1 mm but no more than 1.5 mm occlusal to the CEJ or the crest of the simulated free gingival margin, whichever is most occlusal.
3. The cervical margin has some continuity, is significantly rough and is poorly defined.
4. The cervical bevel, when used, is less than 0.5 mm or greater than 1.5 mm but does not exceed 2 mm and has very poor definition.
5. The path of insertion/line of draw deviates 20° to less than 30° from the long axis of the tooth.

CRITICAL DEFICIENCY

1. The cervical margin is over-extended more than 0.5 mm below the simulated free gingival margin, causing visual damage to the typodont.
2. The cervical margin is under-extended more than 1.5 mm above the simulated free gingival margin or CEJ, whichever is more coronal, and thereby compromises esthetics, resistance and retention form.
3. The cervical margin has no continuity and/or definition.
4. The cervical bevel, when used, has no continuity or is greater than 2 mm and has no definition.
5. The path of insertion/line of draw is grossly unacceptable, deviating 30° or more from the long axis of the tooth.

SCORING CRITERIA: CAST GOLD CROWN PREPARATION
Walls, Taper and Margin

SATISFACTORY

1. Axial tissue removal is optimally 1.5 mm to be sufficient for convenience, retention and resistance form.
2. Walls are smooth and well defined, with no undercuts.
3. There is full visual taper (6°– 8°).
4. The margin (includes knife-edge, chamfer and shoulder with bevel) is optimally 0.5 mm wide.
5. Reduction of the occlusal wall is optimally 1.5 mm.
6. Internal line angles and cusp tips are rounded.
7. The general occlusal anatomy is maintained.

MINIMALLY ACCEPTABLE

1. The axial tissue removal deviates no more than $\pm$ 0.5 mm from optimal.
2. The walls are slightly rough and lack some definition.
3. Taper is present, but nearly parallel (<6°) or slightly excessive (= 8° - 12° per wall).
4. The margin varies slightly in width but is no greater than 1 mm.
5. Occlusal reduction deviates no more than $\pm$ 0.5 mm from optimal.
6. The walls are slightly rough and lack some definition.
7. Internal line angles and cusp tip areas are not completely rounded and show a slight tendency of being sharp.

MARGINALLY SUBSTANDARD

1. The axial tissue removal is over-reduced or under-reduced and deviates more than 0.5 mm but no more than $\pm$ 1 mm from optimal.
2. The axial walls are rough.
3. There is no taper or excessive taper (= 12° - 16° per wall).
4. The margin varies significantly in width and deviates no more than 1 mm from optimal.
5. Occlusal reduction deviates no more than $\pm$ 1 mm from optimal.
6. Internal line angles and cusp tip areas show only minimal rounding, with a greater tendency of being sharp.
7. The occlusal anatomy is flat.

CRITICAL DEFICIENCY

1. The axial tissue removal is grossly over-reduced or under-reduced. The reduction is less than 0.5 mm or greater than 2.5 mm.
2. There is an undercut.
3. The taper is grossly over-reduced (>16° per wall).
4. The margin width is less than 0.5 mm or greater than 2.5 mm.
5. The occlusal wall is grossly over-reduced by greater than 2.5 mm or grossly under-reduced by less than 0.5 mm, resulting in insufficient occlusal clearance for adequate restorative material.
6. The internal line angles or cusp tip areas are excessively sharp with no evidence of rounding.

SCORING CRITERIA: BRIDGE FACTOR
Path of Insertion/Line of Draw

SATISFACTORY

1. The line of draw or path of insertion would allow for the full seating of a fixed prosthesis in a direct vertical plane without rotation, either mesiodistally or buccolingually.

MINIMALLY ACCEPTABLE

1. The line of draw or path of insertion would, due to angulations of the surface of the preparations, require altering the path of insertion from a direct vertical axis to allow full seating.

MARGINALLY SUBSTANDARD

1. The line of draw or path of insertion would not, due to angulations of the surface of the preparations, allow seating of a fixed prosthesis, regardless of the rotation through all available planes, without removal of tooth structure from the coronal third of either/both of the preparations.

CRITICAL DEFICIENCY

1. No line of draw or path of insertion exits through any plane of rotation without the removal of additional tooth structure in the apical two-thirds of either/both of the preparations.

SCORING CRITERIA: CERAMIC CROWN PREPARATION
Cervical Margin and Draw

SATISFACTORY

1. The cervical margin is placed 0.5 mm incisal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is smooth, continuous and well defined on all axial surfaces and exhibits no bevel.
3. The appropriate path of insertion varies less than 10° from parallel to the long axis of the tooth on all axial surfaces, and a line of draw is established.

MINIMALLY ACCEPTABLE

1. The cervical margin is at the level of or no more than 1 mm incisal to the CEJ or simulated free gingival margin, whichever is most coronal.
2. The cervical margin is continuous but slightly rough and lacks some definition.
3. The path of insertion/line of draw deviates 10° to less than 20° from the long axis of the tooth.

MARGINALLY SUBSTANDARD

1. The cervical margin is over-extended 0.5 mm below the CEJ or the crest of the simulated free gingival margin, whichever is most incisal.
2. The cervical margin is under-extended by more than 1 mm but no more than 1.5 mm occlusal to the CEJ or the crest of the simulated free gingival margin, whichever is most incisal.
3. The cervical margin has some continuity, is significantly rough and is poorly defined.
4. The path of insertion/line of draw deviates 20° to less than 30° from the long axis of the tooth.

CRITICAL DEFICIENCY

1. The cervical margin is over-extended by more than 0.5 mm below the simulated free gingival margin, causing visual damage to the typodont.
2. The cervical margin is under-extended by more than 1.5 mm above the simulated free gingival margin or CEJ, whichever is more coronal, and thereby compromises esthetics, resistance and retention form.
3. The cervical margin has no continuity and/or definition.
4. The cervical margin is beveled.
5. The path of insertion/line of draw is grossly unacceptable, deviating 30° or more from the long axis of the tooth.

SCORING CRITERIA: CERAMIC CROWN PREPARATION
Walls, Taper and Marginal Width

SATISFACTORY

1. Axial tissue removal is optimally 1.5 mm to be sufficient for convenience, retention and resistance form.
2. Walls are smooth and well defined with no undercuts.
3. There is full visual taper (6°– 8°).
4. The cervical margin is optimally 1 mm in width.
5. The optimal incisal reduction is 2 mm.
6. The lingual wall height is optimally 2 mm.
7. Internal and external line angles are rounded and smooth.

MINIMALLY ACCEPTABLE

1. The axial tissue removal deviates no more than $\pm$ 0.5 mm from optimal.
2. The walls are slightly rough and lack some definition.
3. Taper is present, but nearly parallel (<6°) or slightly excessive (= 8° - 12° per wall).
4. The cervical margin is more than 1 mm but does not exceed 1.5 mm in width.
5. The incisal reduction is not less than 1.5 mm and not more than 2.5 mm.
6. External and/or internal line angles are rounded but irregular.

MARGINALLY SUBSTANDARD

1. The axial tissue removal is over-reduced or under-reduced but deviates no more than $\pm$ 1 mm from optimal.
2. The axial walls are rough.
3. There is no taper or excessive taper (= 12° - 16° per wall).
4. The cervical margin is 0.5 mm to less than 1 mm or over-extended by more than 1.5 mm not to exceed 2 mm in width.
5. The incisal reduction is less than 1.5 mm or more than 3 mm.
6. The lingual wall height is less than 1.5 mm.
7. External and internal line angles are sharp.

CRITICAL DEFICIENCY

1. The axial tissue removal is grossly over-reduced or under-reduced. The reduction is less than 0.5 mm or greater than 2.5 mm.
2. There is an undercut.
3. The taper is grossly over-reduced (>16° per wall).
4. The cervical margin is less than 0.5 mm or more than 2 mm in width.
5. The incisal reduction is less than 1 mm or more than 3.5 mm.
6. The lingual wall height is less than 1 mm.
7. The external and/or internal line angles are excessively sharp, with no evidence of rounding.

SCORING CRITERIA: PROSTHODONTIC MANIKIN PROCEDURES
Treatment Management

SATISFACTORY

1. The adjacent teeth and/or opposing teeth and/or restorations are free from damage.
2. The simulated gingiva and/or typodont is/are free from damage.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
2. There is slight damage to simulated gingiva and/or typodont consistent with the procedure.

MARGINALLY SUBSTANDARD

1. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or position of the contact. Opposing hard tissue shows minimal evidence of damage and/or alteration inconsistent with the procedure.
2. There is iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration. There is evidence of gross damage and/or alteration to opposing hard tissue inconsistent with the procedure.
2. There is gross iatrogenic damage to the simulated gingiva and/or typodont inconsistent with the procedure.

Section IV: Periodontal Clinical Examination Section – 100 Points
Section V: Restorative Clinical Examination Section – 100 Points

The Periodontal and Restorative Clinical Examination Sections consist of three patient-based procedures performed on the same day. The Periodontal Section is optional, depending on the licensing requirements of the state in which the candidate seeks to practice. Candidates should contact the appropriate state board of dentistry directly to determine state-specific requirements.

Section IV: Periodontal Clinical Examination – 100 points

(Optional, depending on state licensing requirements)

CONTENT	FORMAT
Assignment 1. Case acceptance 2. Pocket depth qualification 3. Subgingival calculus detection *Treatment* 4. Subgingival calculus removal 5. Supragingival plaque/stain removal 6. Tissue and treatment management	Performed on a patient Time: 3 hours or less at the candidate's discretion Treatment Time: 1.5 hours (after case acceptance)

Section V: Restorative Clinical Examination – 100 points

CONTENT	FORMAT
3. Anterior restoration: Class III composite - cavity preparation and restoration 4. Posterior restoration: candidate's choice: • Class II amalgam - cavity preparation and restoration • Class II composite - cavity preparation and restoration • Posterior proximal occlusal (slot) composite – cavity preparation and restoration	Performed on a patient Time: 6 hours or less at the candidate's discretion

Candidates Assigned First to Restorative Treatment

Candidates should enter the clinic and begin setting up at 6:30 AM. For candidates assigned to this group, case acceptance for restorative procedure only, takes place between 7:00 AM and 8:00AM prior to the treatment start time. Clinic Floor Examiners (CFEs) will be available in the clinic beginning at 7:00AM to assist candidates, whenever appropriate, with examination protocol. Beginning at 7:00 AM, candidates assigned to do a Restorative procedure first, may call over a CFE to observe and document the taking of the patient's blood pressure. The patient is then sent to the Evaluation Station for approval of the required forms and radiographs, and for approval of the lesion which has been selected by the candidate for treatment. When the patient is returned from the Evaluation Station and a lesion has been approved for treatment, the candidate may continue pre-treatment preparations but no treatment (including administration of anesthetic) may be performed until the start of the examination is announced at 8:00AM, to begin treatment. When cavity preparation has been completed, the patient is sent to the

Evaluation Station for grading of the preparation and when the restoration is completed, the patent is returned to the Evaluation Station for grading of the restoration. Thus a minimum of two patient visits to the Evaluations Station during candidate treatment time (each taking approximately one half hour) are required. The candidate may also elect to send a patient to the Evaluation Station for approval of requests to extend the cavity preparation beyond the dimensions specified as "Satisfactory" in the grading criteria. Patient visits to the Evaluation Station for this purpose take approximately 15 minutes in most cases. This procedure is explained more fully later in this manual.

Candidates Assigned First to Periodontal Treatment

Candidates should enter the clinic and begin setting up at 6:30 AM. Case acceptance for the periodontal examination takes place at the candidate's cubicle between 7:00AM and 8:00AM. Clinic Floor Examiners (CFEs) will be available in the clinic beginning at 7:00AM, to assist candidates, wherever appropriate, with examination protocol. Beginning at 7:00 AM, candidates assigned to do the Periodontal procedure first, may call over a CFE to observe and approve the Medical History, Consent Form, Anesthetic Request and radiographs. At 8:00 AM the examination begins and the patient may be submitted to the Evaluation Station for Pre-treatment Evaluation. All candidates will be given 90 minutes of treatment time, beginning when the Pre-Treatment Evaluation has been completed. By the end of that 90 minute time period (which will be recorded on the candidate's Periodontal Progress Form), the patient must be in like for return to the Evaluation Station for the final evaluation of the treatment. Thus two patient visits to the Evaluation Station (each taking about one half hour) are required for the Periodontal Examination.

After the initial procedure, either restorative or periodontal, is completed, the candidate may proceed to the other required procedures as they wish as long as all parts of the examination are completed by 5:00 PM on that day – with the following stipulations:

If the final procedure of the day is the Periodontal procedure, the Case Acceptance and the Pre-treatment Evaluation must be completed by 4:15 PM so the candidate will have at least 45 minutes to treat the patient. All patients must be in line for final evaluation no later than 5:00 PM. Patients not in line at the Coordinator Desk by 5:00 PM will not be evaluated.

For the final procedure of the day, whether it is a posterior or anterior restoration, the lesion acceptance must be completed by 3:15 PM, the patient must be in line for preparation evaluation by 4:00 PM and the patient must be in line for final restoration evaluation by 5:00 PM.

If restorative patients are not in line for final evaluation by 5:00 PM, any prepared teeth will need to be temporized and those with restorations in place, will not be graded. An overview of the testing schedule is shown below:

Restorative and Periodontal and Testing Schedule Overview

Candidates will be assigned to begin the day with either a restorative or periodontal procedure.

Restorative Procedure First		**Periodontal Procedure First**	
TIME	**ACTIVITY**	**TIME**	**ACTIVITY**
6:30 a.m.	Enter the clinic and begin set-up.	6:30 a.m.	Enter the clinic and begin set-up.
7:00 a.m. – 8:00 a.m.	Clinic floor examiners will be available in the clinic to assist candidates with examination protocol. A CFE must observe and document when the candidate takes the patient's blood pressure. Afterward, the candidate should send his/her patient to the Evaluation Station to have the treatment selection, forms and radiographs approved. After the treatment selection is approved, the candidate may continue pre-treatment preparations. No treatment (including administering anesthesia) may be performed until 8:00 a.m.	7:00 a.m. – 8:00 a.m.	Case acceptance takes place in the candidate's cubicle. Clinic floor examiners will be available in the clinic to assist candidates with examination protocol. The candidate should request a CFE to observe and approve the Medical History, Patient Consent Form, *anesthetic record* on the Progress Form and radiographs.
8:00 a.m.	Treatment time begins.	8:00 a.m.	Examination begins. Send patients to the Evaluation Station for pre-treatment evaluation.
	Candidates may work at their own pace to complete the first restorative treatment. (Note that candidates must complete two restorative treatments and one periodontal treatment before 5:00 p.m.) Candidates must send their patients to the Evaluation Station after completing the preparation and again after restoration. Thus, patients must visit the Evaluation Station at least twice during treatment time. Each visit will take approximately 30 minutes. Patients should also be sent to the Evaluation station if the candidate needs approval for a request to modify the preparation beyond the dimensions specified as	Treatment Time	Candidates have 90 minutes to complete the periodontal treatment, starting after the patient returns from the Evaluation Station for the pre-treatment check. Patients must be in line for evaluation by the 90-minute mark. Thus, patients must visit the Evaluation Station twice during the Periodontal Section – once before the treatment and once afterward. Each visit will take approximately 30 minutes.

	Restorative and Periodontal Testing Schedule Overview (Continued)		

After completing the initial procedure, candidates may continue to the remaining procedures in whichever order they choose. All procedures must be completed by 5:00 p.m.

- If the final procedure is the periodontal procedure, the case acceptance and pre-treatment evaluation must be completed by 4:15p.m. in order to allow 45 minutes for treatment time. Patients not in line at the Coordinator Desk by 5:00 p.m. will not be evaluated.
- If the final procedure is a restorative procedure, the case acceptance must be completed by 3:15 p.m., the patient must be in line for preparation evaluation by 4:00 p.m. and the patient must be in line for final evaluation by 5:00 p.m. If patients are not in line for final evaluation by 5:00 p.m., the candidate must temporize any prepared teeth, and restorations already in place will not be graded.

Retesting Schedule

If a candidate needs to retake only the Periodontal or the Restorative Examination Section, he/she will have three hours total (90 minutes actual treatment time) for the Periodontal Section or a total of six hours to complete the Restorative Section (both required restorative procedures).

Testing Site Logistics

NERB personnel and examiners will administer the examination and evaluate candidate performance. Examiners will be stationed in key areas throughout the facility.

Definition of Terms

PERSONNEL	STATIONS
Chief Examiner – the official in charge of the entire examination. Clinic Floor Examiner (CFE) – an examiner responsible for overseeing and assisting candidates in the clinic. Clinic Floor Captain – the official responsible for coordinating all activity in the clinic. Restorative or Periodontal Examiner – an examiner responsible for evaluating and approving case selections and clinical procedures. These examiners are stationed in the Evaluation Station (separated from the clinic floor) in order to preserve the candidates' anonymity. Restorative or Periodontal Captain – the official responsible to coordinate the evaluation process in the Evaluation Station and evaluate Modification Requests. Desk Coordinator – the official responsible for logistics and paperwork during the examination.	Coordinator Desk – the desk where patient movement into and out of the Evaluation Station is managed. Evaluation Station – the clinical area where case selection, modification requests and clinical procedures are evaluated and approved. Candidates may not enter the Evaluation Station; patients must be sent to the station with all instruments and paperwork necessary for evaluation. Instructions to the candidate from the examiners in the Evaluation Station will be communicated in writing and delivered by a CFE. Express Chair – the area within the Evaluation Station used to evaluate and expedite modification requests.

Patient Selection

Candidates must furnish their own patients for Sections IV and V. Patient selection and management is an important part of the examination and should be completed independently, without the help or assistance of faculty or colleagues.

For the Restorative Examination Section, candidates may present a backup patient if their first-choice patient is not accepted by the examiners. However, only one patient may be submitted for the Periodontal Examination. Due to the natural stress of an examination, candidates should avoid selecting patients who are apprehensive, hypersensitive, have physical limitations that could hinder the examination process or aren't able to stay for the duration of the examination. However, at the candidate's discretion, an individual who has a physical disability may, in most cases, be a patient in the examination. Candidates must contact NERB a minimum of 60 days prior to the examination for authorization for patients with special requirements.

NERB will **not** accept patients who fall into these categories:

- Patients who are under 18 years of age or who are unable to give legal consent
- Dentists (licensed or unlicensed) and third- or fourth-year (final year) dental students
- Dental hygienists (licensed or unlicensed) and final-year dental hygiene students (Periodontal Section only)

Interpreters. For patients who don't speak English, candidates must arrange for an interpreter and are responsible for the conduct of the interpreter during the examination. An interpreter may **NOT** be

- Under 18 years of age
- A faculty member, dentist or dental hygienist (licensed or unlicensed)
- A third-or fourth-year dental student
- A final-year dental hygiene student

The chairside assistant may not act as an interpreter. On the day of the examination and prior to the start of the examination, the candidate must complete an Interpreter Disclosure Statement and Interpreter ID Form available at the Coordinator Desk. The candidate must have two 2" x 2" photographs of the interpreter to affix to the Interpreter ID Form, and the interpreter must wear the ID at all times when on the clinic floor.

Patient management. The candidate and assisting auxiliary must behave in an ethical and proper manner towards all patients. Patients shall be treated with proper concern for their safety and comfort. The candidate shall accurately complete the appropriate Medical History Form and establish a diagnosis and treatment plan as required for each selected patient. The patient's health status must be acceptable for clinical treatment and the lengthy examination process. Misinformation or missing information that would endanger the patient, candidate, auxiliary personnel or examiners is considered cause for dismissal from the examination.

Patient's Medical History

A Medical History Form must be completed independently by the candidate (without help of faculty or colleagues) for each clinical patient prior to the examination. This form may be completed prior to the examination date; however, the form must reflect the patient's current health at the time of the examination.

The Medical History Form includes questions pertaining to medical conditions that might affect the patient's suitability for treatment. **If the patient gives a positive response to one of these questions, the candidate must explore the nature of the condition and provide an adequate explanation on the Medical History Form.**

Blood pressure. A screening blood pressure reading should be taken when the patient is selected and **must be retaken on the day of the examination and recorded on the Medical History Form.** The examination-

day reading must be observed and documented by a CFE. If the patient is sitting for more than one examination section on the same day, his/her blood pressure must be taken, observed by a CFE and recorded prior to each section.

Medications. On the day of the examination, the candidate must document on the Medical History Form all medications or supplements taken by the patient within the last 24 hours. Candidates should document antibiotic premedication on the appropriate Progress Form, as well as on the Medical History Form.

Health qualifications. In order to participate in the examination, patients must meet the following criteria:

1. Patients must have a blood pressure reading of 159/94 or below to proceed without medical clearance. Patients with a blood pressure reading between 160/95 and 179/109 are accepted only with a written medical clearance from the patient's physician. Patients with a blood pressure reading 180/110 or greater will not be accepted for this examination, even if a physician authorizes treatment.
2. Candidates who are sharing a patient requiring **antibiotic prophylaxis** must treat the patient the same day. Treatment of the same patient on subsequent clinical days will not be permitted.
3. Patients must have no history of heart attack (myocardial infarction), stroke or cardiac surgery within the last six months.
4. Patients may not have active tuberculosis. A patient who has tested positive for tuberculosis or who is being treated for tuberculosis but does not have the clinical symptoms is acceptable.
5. Patients may not have undergone chemotherapy treatment for cancer within the last six months.
6. Patients participating in the Periodontal Examination Section may not have a history of taking IV **or** orally-administered **bisphosphonate medications**. Patients participating in the Restorative Examination Section may not have a history of taking IV-administered bisphosphonate medications (except an annual IV dosage for osteoporosis). However, patients who have taken oral bisphosphonates **may** participate in the Restorative Section.
7. Patients may not have active incidence of bisphosphonate osteonecrosis of the jaw (BON), also known as osteochemonecrosis or, osteonecrosis of the jaw (ONJ).
8. Patients may not have any condition or medication/drug history that might be adversely affected by the length or nature of the examination procedures.
9. Patients with latex allergies may not participate.
10. If the patient answers "yes" to any of the questions on the Medical History Form, the candidate must explore the item further and determine whether a medical clearance from a licensed physician would be appropriate. A medical clearance is required if the finding could affect the patient's suitability for elective dental treatment during the examination.

    Candidates must follow the current American Heart Association **antibiotic premedication** recommendations when treating patients at potential risk of infective endocarditis following dental treatment. A medical clearance may be indicated to determine the patient's potential risk of infective endocarditis.

Medical clearance. If the patient indicates a medical history that could affect his/her suitability for treatment, the candidate must receive written medical clearance from a licensed physician indicating that the patient may participate in the examination. The medical clearance, if necessary, must include

- A clearly legible statement from a licensed physician written within 30 days prior to the examination on official letterhead
- A positive statement of how the patient should be medically managed
- The physician's clearly legible name, address and phone number
- A telephone number where the physician may be reached on the day of the examination if a question arises regarding the patient's health

The Medical History Form and medical clearance will be reviewed by a CFE for the Restorative and Periodontal Clinical Examinations and must accompany the patient when the treatment selection is submitted for evaluation (patient check-in/case acceptance). If the patient sits for more than one candidate, a separate Medical History Form and Patient Consent Form must be completed for each examination.

Documentation

Patient Consent Form. A Patient Consent Form must be completed and signed by each patient prior to any treatment being rendered. Initially, **only the candidate's initials and date** should be recorded on the Consent Form; the candidate's name must be added **after** the examination is completed and **before** the records are turned in.

Premedication record. A record must be kept for each patient who requires premedication prior to or during the course of the examination. For each procedure, there is a place on the Progress Form to record the type(s) and dosage(s) of medication(s) administered. Candidates who are sharing a patient requiring antibiotic prophylaxis must treat the patient the same clinical day. Treatment of the same patient on subsequent days will not be permitted.

Anesthetic record. At the time of the examination and prior to the start-check for each restorative or periodontal clinical procedure, the following anesthetic information must be indicated on the appropriate Progress Form:

- Type(s) of Injection (specific block or infiltration to be administered)
- Anesthetic(s) (generic or brand name and percent used)
- Vasoconstrictor (type and concentration)
- Quantity (volume)

If more than two dental anesthetic carpules (approximately 3.6 cc) of local anesthetic are needed during any clinical procedure, the candidate must request approval from a CFE, who will document and initial the request. This protocol must be followed for each subsequent carpule. Additional anesthetic solution may be administered only with approval by the CFE. The total quantity of anesthetic solution used must also be documented on the Progress Form.

An aspirating syringe and proper aspirating technique must be used for the administration of local anesthetic solutions. The administration of inhalation or parenteral analgesia or sedation is not permitted for any clinical procedures.

If the patient has already received anesthesia earlier on the same day, the candidate must present the record of the previous anesthesia to the CFE before administering additional anesthesia.

Radiographs. The radiographs, which are appropriate for each part of the examination, must demonstrate sufficient contrast to reveal clearly the extent of caries and other pathoses. If the candidate submits poor quality radiographs (film or digital prints), examiners will take the following action:

- First offense – examiners will request a new set.
- Second offense – examiners will deduct points and request a new set.
- Third offense – candidate will be dismissed from the examination.

Additional radiographs may be required by the examiner during the course of the examination. The radiographic films or digital prints or images used in the examination may be collected at the end of the examination and become the property of NERB. Post-operative radiographs or digital prints or images are not routinely required. However, a post-operative radiograph may be requested at any time at the discretion of an examiner. Altering or failing to provide radiographs or digital prints or images will result in failure of the examination.

Procedures

Sequence of treatment. Candidates will be assigned to start with either the periodontal procedure or one of the two restorative procedures. Once the initial procedure is completed, the candidate may begin the remaining two procedures in whichever order he/she desires.

Instruments submitted with the patient to the Evaluation Station must be fully functional. Mirrors that are clouded, tinted or unclear and explorers that are not fine and sharp will be rejected, and the candidate will be required to submit new instruments.

Communication from examiners. Candidates **may** receive written instructions (Instruction to Candidate Form) from the examiners in the Evaluation Station to resubmit a treatment selection or to modify their treatment. A CFE should deliver this instruction and will check to see that the candidate understands its contents.

Candidates who receive an Instruction to Candidate Form should not assume that they have failed. It is possible to pass the examination after being instructed to modify a procedure. Conversely, candidates who receive no instructions to modify procedures should not necessarily assume that their performance is totally satisfactory or will result in a passing grade. In every instance, each procedure is evaluated as it is presented rather than as it may be modified. The examiner ratings are not converted to scores until after the examination is completed and all records are processed by computer. Examiners at the examination site do not know and cannot provide information on whether each candidate has passed or failed a specific examination.

Infection control. Candidates must follow all infection control guidelines required by the state where the examination is taking place and must follow the current CDC guidelines for infection control in dental healthcare settings. It is the candidate's responsibility to ensure that both the candidate and his/her auxiliary fully comply with these protocols. Failure to comply will result in loss of points, and any violation that could lead to direct patient harm will result in termination of the examination and loss of all points.

Periodontal Examination Section Requirements

This year the Periodontal Examination is an optional part of the ADEX Examination, depending on the licensing requirements of the state in which the candidate seeks to practice. Candidates should contact the appropriate state board of dentistry directly to determine state-specific requirements before deciding whether to take the Periodontal Section.

Patient eligibility. Patients must meet the eligibility requirements listed in the prior section.

Medical History and Patient Consent Forms must be completed as listed above, and signed copies of each must be submitted for each patient treated.

Radiographs. Radiographs for the Periodontal Examination Section must meet the following criteria:

- Candidates must submit a complete mouth radiographic series exposed within the previous three years. The radiographs must be mounted according to ADA procedures (convexity up), and the mount must indicate the exposure date, patient's name, right and left side and candidate identification number.
- Candidates must also submit four bitewing radiographs exposed within the previous six months.
- The complete mouth series must be mounted separately from the bitewings, unless the complete mouth series were taken within the previous six months.
- Copies are acceptable for the Periodontal Examination.
- Digital images or digital prints are permitted. Candidates from outside the host school will need to submit digital prints as the school will not up load images from outside the facility. If digital prints are to be used, the radiographs must be printed and submitted on acetate (preferably blue) or on photo quality paper.
- If the school name is normally incorporated into the digital image, this should be removed or masked, if possible, before printing out the image on photo quality paper or the CFE should be asked to cover such a school identifier on the day of the examination.
- Alternatively, images displayed on monitors must be approved by school officials where the exam takes place.
- Panoramic radiographs are not permitted.

Periodontal instruments. These instruments are required for the Periodontal Examination Section:

- #4 or #5 front-surface mirror (unscratched, untinted, non-disposable)
- 11/12 explorer
- Probe with Williams markings (1, 2, 3, 5, 7, 8, 9, 10 mm)

The candidate's performance will not be evaluated without the proper instruments. Sonic/ultrasonic instruments are permissible for scaling, but they may not be available at the examination site (check with the school coordinator). If the candidate elects to provide his/her own unit, he/she must check with the school about appropriate connection mechanisms. Air-abrasive polishers are **not** permissible.

Treatment selection. The candidate's treatment selection must include the proper number of teeth, adequate deposits of calculus and appropriate pocket depths as defined below:

- **Teeth**. There must be at least six and not more than eight permanent teeth selected, at least three of which are molars or premolars, including at least one molar. All posterior teeth must have at least one approximating tooth surface within 2 mm distance. Each of the selected teeth must have at least one surface of subgingival calculus selected for removal.
- **Pocket depths**. There must be three pockets of 4 mm or greater in depth, each on a separate tooth from among the six to eight teeth selected for treatment. There is a penalty if one of these pockets is

less than 4 mm and a severe penalty if two or more are less than 4 mm. (Examiners allow a ± 1 mm leeway in measurement.) It is recommended that pocket depths greater than 6 mm not be included; however, the patient will not be rejected if pockets are this deep. Although the three pockets of 4 mm or more must be on the teeth within the treatment selection, it is not necessary that those surfaces be selected for calculus removal.

- **Calculus**. There must be exactly 12 surfaces of explorer-detectable subgingival calculus identified on the selected teeth, and no more than four surfaces may be on the incisors. Three of the 12 identified surfaces of calculus must be on interproximal surfaces of posterior teeth, i.e., on molars and/or premolars.
    - Explorer detectable subgingival calculus is defined as a distinct deposit of calculus that can be felt with an #11/12 explorer as it passes over the calculus. Qualified deposits may exhibit such characteristics as:
        - A definite "jump" or "bump" felt by the explorer, with the rough surface characteristic of calculus
        - Ledges or ring formations
        - Spiny or nodular formations
    - Qualified deposits must be apical to the gingival margin and may occur with or without associated supragingival deposits.
- **Exclusions.** Patients with full-banded orthodontics are **not** acceptable. Implants or teeth with any fixed appliance – banded, bonded or splinted, either orthodontically or periodontally – may **not** be included in the treatment selection. No retained primary teeth may be included in the treatment selection.

Candidates may use the Treatment Selection Worksheet (available in Appendix B) to identify and document a selection of the patient's teeth that meet these criteria. The candidate should indicate the presence of subgingival calculus on the Treatment Selection Worksheet by marking the appropriate letter for the surface in the box next to the number of the tooth selected for treatment. If subgingival calculus is present on the line angles of the tooth, it must be marked on the interproximal surface, e.g., a deposit on the distofacial line angle would be marked on the distal surface. **The numbers of the selected teeth must be listed in ascending order.**

Prior to the examination, the candidate must transfer the information about his/her treatment selection from the Worksheet to the Electronic Periodontal Evaluation Form, which will be reviewed by examiners. Visit the NERB website to access the Electronic Periodontal Evaluation Form.

Scaling. After the candidate performs the periodontal procedure, the subgingival surfaces of the assigned teeth must be smooth, with no deposits detectable with an 11/12 explorer. Air may be used to deflect the tissue to locate areas for tactile confirmation. (All subgingival surfaces on an assigned tooth must be scaled, but only the selected surface will be evaluated.)

Supragingival deposits (polishing). All supragingival calculus, plaque and stain must be removed from **all coronal surfaces** of the assigned teeth so that all surfaces are visually clean when air-dried and tactilely smooth upon examination with an 11/12 explorer. The use of disclosing solution is **not** permitted.

Periodontal Examination Section Procedure and Patient Management Guidelines

1. The patient must be informed that he/she will be participating in an examination and that additional treatment may be required to meet his/her oral health needs.

2. **Only one patient may be presented for the Periodontal Clinical Examination Section. Once a patient has been submitted to the Clinic Floor Examiner** for patient check-in, **a back-up patient may not be presented.** If, before the patient is sent to the Evaluation Station, the candidate determines that the patient is unacceptable, a back-up patient may be used. The work-up of back-up patients, if done during the allotted examination time, is at the expense of the time allowed for the examination.

3. The Treatment Selection Worksheet, a practice form provided in Appendix B, may be completed prior to the day of the examination to help the candidate identify the selection of teeth he/she will present for evaluation. Candidates are responsible for independently (without the help of faculty and/or colleagues) selecting and documenting teeth and surfaces for treatment that fulfill the published criteria. Prior to the day of the examination the information on the Treatment Selection Worksheet should be **accurately** transferred to the Electronic Periodontal Evaluation Form, which is the official form used by examiners.

4. The candidate must accurately transfer the information from the Treatment Selection Worksheet to the Electronic Periodontal Evaluation Form (available on the NERB website up to 48 hours prior to the exam) to indicate his/her treatment selection. The teeth should be listed in ascending order, and the surfaces to be treated should be indicated in the smaller box to the right.

5. The Periodontal Progress Form will be provided at the examination site. When the candidate receives the Progress Form, he/she should place a candidate identification label on the form and enter his/her cubicle number.

6. The procedures, instruments and materials used are the choice of the candidate, as long as they are currently accepted and taught by accredited dental schools and the candidate has been trained in their use. It is the responsibility of the candidate to provide the instruments used in this examination and listed in this Candidate Manual, unless such instruments are furnished by the school.

7. If the candidate is scheduled to perform the periodontal procedure as the first procedure of the day, he/she may call over a CFE beginning at 7:00 a.m. to check the Medical History Form, Patient Consent Form (including the *anesthetic record* section) and observe taking and recording the patient's blood pressure. At 8:00 a.m. the patient may be sent to the Evaluation Station for patient check-in/case acceptance. If the Periodontal Examination Section is not the candidate's first procedure of the day, the candidate may begin the periodontal procedure at any time after the first restorative procedure is completed.

8. If any problems arise during the examination, the candidate should immediately notify a CFE. The CFE is also present to aid in any emergencies that may occur.

9. Candidates must complete the anesthesia portion on the Progress Form **whether or not** anesthesia is to be used. If the patient is too sensitive to withstand the use of a periodontal probe or explorer during patient check-in, the candidate may request authorization from a CFE to anesthetize the patient prior to patient check-in.

10. When the patient is sent to the Evaluation Station for patient check-in, he/she will first sign in with the Desk Coordinator. Patients will be evaluated for case acceptance in the order in which

they are signed in. Patients must take the required forms and instruments with them to the Evaluation Station. Only the patient may carry the tray to the Evaluation Station. The following items must be presented on the instrument tray for patient check-in:

- Completed Medical History Form
- Signed Patient Consent Form
- Completed Periodontal Progress Form
- Radiographs
- Color-coded cubicle ID card
- Instruments (no scalers or curettes):
    - Clear mirror (unscratched, untinted, non-disposable)
    - 11/12 explorer
    - Probe with Williams markings (1, 2, 3, 5, 7, 8, 9, 10 mm)
    - Air/water syringe tip
- Napkin

Note: The instruments must be placed on the tray and covered with the napkin, fluid-resistant side down. The Progress Form, Medical History Form, Patient Consent Form, radiographs and color-coded cubicle ID card must be placed on top. DO NOT turn in the Treatment Selection Worksheet.

11. The examiners will evaluate the three teeth with 4 mm or deeper pockets and the six to eight teeth with the 12 surfaces of subgingival calculus charted.

12. The Desk Coordinator will indicate a Start and Finish Treatment Time on the Periodontal Progress Form. The approximate total time for the Periodontal Examination Section is about 3 hours. The patient treatment time is 1 ½ hours. Candidates must receive a start time 45 minutes prior to the end of the examination day if they are beginning the Periodontal Section after completing the Restorative Section.

    When the patient returns from the Evaluation Station, treatment should begin. Treatment continues until it is completed or until the Finish Time, as noted on the Periodontal Progress Form. If candidates finish the patient treatment before their assigned Finish Time, they may sign-in the patient with the Desk Coordinator for evaluation. The candidate **must scale all subgingival surfaces** on the six to eight selected teeth, but **only the 12 selected surfaces selected by the candidate will be evaluated.** Supragingival calculus, plaque and stain must be removed from all surfaces of the selected teeth. No other teeth may be scaled or polished during the examination, and once the examination is completed, the patient must be dismissed.

13. By the stated Finish Time, each candidate should have completed subgingival calculus removal on the 12 selected surfaces and removed all supragingival calculus, plaque and stain from the entire crown of the selected teeth. The patient must be signed in with the Desk Coordinator for evaluation at the Evaluation Station by the recorded Finish Time.

14. For the treatment evaluation, the candidate must send the patient, wearing a clean napkin, to the Evaluation Station. The patient should carry the following items to the Evaluation Station on an instrument tray. Instruments must be covered with a napkin and forms and radiographs placed on top of the napkin.

    - Completed Medical History Form

- Patient Consent Form
- Completed Periodontal Progress Form
- Radiographs
- Color-coded cubicle ID card
- Required instruments (no scalers or curettes):
    - Clear mirror (unscratched, untinted, non-disposable)
    - 11/12 explorer
    - Probe with Williams markings (1, 2, 3, 5, 7, 8, 9, 10 mm)
    - Air/water syringe tip
- Napkin

15. The examiners will evaluate tissue management and subgingival calculus removal from the selected tooth surfaces and evaluate supragingival calculus, stain and plaque removal from all surfaces on the selected teeth.

16. When the patient returns from the Evaluation Station, the candidate may dismiss the patient, unless directed to do otherwise. The candidate must clean the clinic area following accepted infection control procedures.

SCORING CRITERIA: PERIODONTAL EXAMINATION
Patient Selection

SATISFACTORY

1. The Patient Consent Form, Medical History, Progress Form and Periodontal Evaluation Form are complete, accurate and current.
2. Both systolic and diastolic blood pressure are less than or equal to 159/94, or systolic and diastolic blood pressure are between 160/95 and 179/109 **with** a written medical clearance from a physician authorizing treatment during the examination.
3. Radiographs are of diagnostic quality and reflect the current clinical condition of the mouth. Periapicals have been exposed within the past three years, and bitewings have been exposed within the past six months. Radiographs are properly mounted and labeled with exposure date and patient's name.
4. The Calculus Detection portion of the Periodontal Evaluation Form is properly completed, indicating
   - Six to eight teeth selected, each with at least one surface of calculus charted
   - At least three posteriors (molars, premolars), including at least one molar, in the selection. All posterior teeth must have at least one approximating tooth within 2 mm distance.
   - Exactly 12 surfaces of subgingival calculus charted, including at least three surfaces of interproximal calculus on molars/premolars
   - At least eight of the surfaces on canines, premolars or molars (no more than four surfaces on incisors)
   - Three pockets of 4 mm or greater in depth, each on a different tooth within the selection

MINIMALLY ACCEPTABLE

1. The Patient Consent Form is incorrect or not signed by patient.*
2. The Medical History is incomplete*, is missing candidate initials* or patient signature* or has slight inaccuracies that do not endanger the patient or change the treatment.
3. The Progress Form has inaccuracies or is incomplete or missing.*
4. Blood pressure has not been taken or is not recorded* but, upon correction, meets *Satisfactory* criteria.
5. Radiographs are available but were not submitted with the patient for initial evaluation.***
6. The Calculus Detection portion of the Evaluation Form has not been filled out or is filled out incorrectly, e.g., the form demonstrates
   - Fewer than six or more than eight selected teeth
   - Fewer than three molars or premolars and/or no approximating tooth within 2 mm of one or more of the selected posterior teeth
   - One or more selected teeth without any surfaces of calculus charted
   - More or fewer than 12 surfaces of subgingival calculus charted
   - Fewer than three surfaces of **interproximal** calculus on molars and/or premolars more than four surfaces of subgingival calculus on incisors**
   - Three separate teeth and/or surfaces are not indicated for Pocket Depth Qualification and/or one or more of the teeth are outside the treatment selection.**

* Records and patient will be sent back to the candidate with an Instruction to Candidate Form requesting correction. (If the Periodontal Evaluation Form is completed correctly, it will be retained in the Evaluation Station.)

** Records and patient will be sent back to the candidate with an Instruction to Candidate Form requesting correction.

*** The candidate will receive an Instruction to Candidate Form requesting radiographs.

SCORING CRITERIA: PERIODONTAL EXAMINATION
Patient Selection Continued

MARGINALLY SUBSTANDARD

1. Medical History has inaccuracies that do not endanger the patient but do change the treatment or require further explanation by candidate. The candidate submits an incomplete or incorrect Periodontal Progress Form or Evaluation Form for the second time.
2. Radiographs are of poor diagnostic quality and/or do not meet all of the criteria to be considered *Satisfactory.*
3. Of the three teeth indicated with pocket measurements of 4 mm or more in depth, only two teeth are found to have measurements of 4 mm or more and/or one or more of these teeth are outside the treatment selection on the second submission.

* Records and patient are sent back to the candidate with an Instruction to Candidate Form requesting corrections.

CRITICAL DEFICIENCY

1. The Medical History has inaccuracies or indicates the presence of conditions that **do** endanger the patient, candidate and/or examiners (in this situation, the Periodontal Examination Section will be stopped). The candidate submits an incomplete and/or incorrect Patient Consent Form or Medical History for the second time.
2. The patient's systolic and/or diastolic blood pressure is between 160/95 and 179/109 **without** a written medical clearance from a physician authorizing treatment, or blood pressure is 180/110 or greater even with a written medical clearance from a physician authorizing treatment.
3. Radiographs are of unacceptable diagnostic quality and/or are missing and not available on request. (In this situation, the Periodontal Examination Section will be stopped).
4. Of the three teeth indicated with sulcus/pocket measurements of 4 mm or more in depth, fewer than two teeth are found to have pockets of 4 mm or more.

SCORING CRITERIA: PERIODONTAL EXAMINATION
Tissue and Treatment Management

SATISFACTORY

1. The patient has adequate anesthesia for pain control, is comfortable and demonstrates no evidence of distress or pain.
2. Instruments, polishing cups or brushes and dental floss are effectively utilized so that no unwarranted soft or hard tissue trauma occurs as a result of the scaling and polishing procedures

MINIMALLY ACCEPTABLE

1. There is slight soft tissue trauma that is consistent with the procedure.

MARGINALLY SUBSTANDARD

1. There is inadequate anesthesia for pain control. (The patient is in obvious distress or pain.)
2. There is minor soft tissue trauma that is inconsistent with the procedure. Soft tissue trauma may include, but is not limited to, abrasions, lacerations or ultrasonic burns.
3. There is minor hard tissue trauma that is inconsistent with the procedure. Hard tissue trauma may include root surface abrasions that do not require additional definitive treatment.

CRITICAL DEFICIENCY

1. There is major damage to the soft and/or hard tissue that is inconsistent with the procedure and preexisting condition. This damage may include, but is not limited to, such trauma as
    - Amputated papillae
    - Exposure of the alveolar process
    - A laceration or damage that requires suturing and/or periodontal packing
    - One or more ultrasonic burns that require follow up treatment
    - A broken instrument tip in the sulcus or soft tissue
    - Root surface abrasions that require additional definitive treatment

Restorative Examination Section Requirements

Patient eligibility. Patients must meet the eligibility requirements listed on page 63.

Medical History and Patient Consent Forms must be completed as listed on page 63, and signed copies of each must be submitted for each patient treated.

Radiographs

Radiographs for the Restorative Examination Section must meet the following requirements:

- For the posterior tooth to be treated, the candidate must provide original periapical and bitewing radiographs.
- For the anterior tooth, the candidate must provide an original periapical radiograph.
- The radiographic films should not have been exposed more than six months prior to the examination, and must depict the **current clinical condition of the tooth** to be treated. If a candidate is utilizing a patient treated by another candidate during the same examination series and wishes to treat an adjacent tooth, he/she need not submit a new radiograph unless there is a specific clinical indication.
- Mount the radiographic films according to ADA format, in a small plastic mount with transparent tape to the appropriate Restorative Progress Form provided by NERB.
- Copies of original radiographs are **not** acceptable.
- Digital prints on photo quality paper may be utilized. The candidate must provide the following information on the back of the print:
    - Patient's name
    - Date the radiographs were taken
    - The statement "original and unaltered images"
    - Signature of the individual who made the radiographs (or a school official or appropriate school embossed seal or stamp)
- If the school name is normally incorporated into the digital image, this should be removed or masked, if possible, before printing out the image on photo quality paper or the CFE should be asked to cover such a school identifier on the day of the examination.
- Alternatively, digital images may be displayed on monitors if they are approved as original and unaltered by the school where the examination takes place. Candidates from outside the school will need to submit digital prints, if using digital images, as the school will not up load images from outside the facility.
- Interproximal caries must be shown radiographically to **penetrate at least to the dento-enamel junction** (or have evidence of equivalent depth clinically)**.**

Candidates are advised that with high speed radiographic film (such as F-speed film) the lesion is likely to be larger clinically than what is seen on the radiograph. If the candidate submits poor quality or non-diagnostic radiographs (film or digital prints), examiners will take the following action:

- First offense – examiners will request a new set.
- Second offense – examiners will deduct points and request a new set.
- Third offense – candidate will be dismissed from the examination.

Post-operative radiographs. Post-operative radiographs are not routinely required. However, a post-op radiograph may be requested at any time at the discretion of the examiners to evaluate the clinical condition of the patient. The radiograph should meet the same criteria as specified for pre-op radiographs and should be mounted and returned to the requesting examiner for evaluation.

Treatment Selection and Patient Check-in

Patient selection is very important. If the candidate is unable to complete a procedure due to patient management problems, the procedure cannot be evaluated and no credit will be assigned. No more than two treatment selections may be submitted for a procedure. If a second treatment selection is rejected or a second treatment selection is not presented after the first lesion is rejected, a candidate may not continue with that procedure and will receive a "0" for that portion of the examination.

Careful clinical judgments should be used if planning approximating lesions.

Sharing patients. Any tooth selected for treatment must have all lesions treated before the end of the examination day.

- For the posterior restoration, one tooth may not be shared by two candidates for treatment during the examination. If the tooth has a mesial and distal lesion when presented for evaluation, the candidate must treat both lesions by the end of the examination. Any other carious lesions on the tooth must have been previously treated or the submission will be rejected.
- For the anterior restoration, one tooth may be shared by two candidates for treatment during the examination. A mesial lesion may be treated by one candidate and a distal lesion by another candidate, as long as both lesions are treated by the end of the examination day. Any other lesion on the tooth must have been previously treated or the submission will be rejected. If a tooth has two lesions to be treated and the first candidate has to temporize their preparation, the second candidate may proceed with the other lesion without penalty. However, if a tooth has two lesions to be treated and the first candidate's treatment results in an exposure, the second candidate may not treat the other lesion.

Exclusions. The following will not be accepted for the Restorative Examination Section:

- Non-vital teeth, and/or teeth with pulpal pathology or endodontic treatment
- Teeth with facial veneers
- Mobility of Class III or greater

Other recommendations.

- Lesions on the distal surface of mandibular first premolars are acceptable for Class II amalgam but not recommended.
- Lesions on the distal surface of cuspids are allowed for Class III composite only, not Class II amalgam.
- Avoid potential pulpal involvement (too large a lesion) or cuspal replacement.
- Circumferential decalcification contiguous with the lesion or proposed restoration is discouraged.

Patient check-in. The candidate should set up at least 30 minutes before the examination begins and have all materials prepared to send patients to the Evaluation Station for patient check-in, where the treatment selection will be evaluated by the examiners. On the clinic floor, the CFE verifies the blood pressure; then, in the Evaluation Station, all treatment selections are approved or rejected by at least two of three examiners evaluating anonymously. If a patient meets the requirements for both the posterior and anterior restorations, both may be approved in the Evaluation Station at the same time, but the first restoration must be completed before the second restoration may be begun. Only one patient may be submitted for a patient check-in at a time. If the candidate is utilizing two patents for the Restorative Examination Section, only one may be submitted to start the examination. The second may not be submitted until the first is finished. The local anesthesia request portion of the Restorative Progress Form must be filled out prior to submitting the patient to the Evaluation Station for patient check-in/case acceptance. In the event that the first lesion submitted is not approved, a second lesion may be submitted to the Evaluation Station.

For patient check-in, the candidate will present:

- Completed Medical History Form
- Signed Patient Consent Form
- Progress Form, including completed *anesthetic record* and indicating tooth number and type of restoration
- Radiographs (bitewing and periapicals as required - no more than six months old) that depict the the tooth and surrounding structures, properly mounted and taped to the Progress Form
- Instruments:
    - Clear mirror (unscratched, untinted, non-disposable)
    - Explorer (fine and sharp)
    - Cotton pliers
    - Probe with 1 mm markings
    - Articulating paper and holder

Under no circumstances can anesthetic solution be administered prior to patient check-in.

Treatment Guidelines

Restorative instruments and equipment. Candidates must provide the following materials for use during the Restorative Examination Section:

- Clear mirror (unscratched, untinted, non-disposable)
- Explorer (fine and sharp)
- Probe with Williams markings (1, 2, 3, 5, 7, 8, 9, 10 mm)

Isolation dam. During the Restorative Examination Section, cavity preparations may be instrumented with or without an isolation dam. An isolation dam that is intact (not torn or leaking) must be in place when the patient is sent for evaluation of the amalgam and composite preparations, as well as for all requests for modification and for the placement of restorative materials. An isolation dam must be in place if a pulpal exposure is anticipated or occurs. The isolation dam **must be removed** when the patient is sent for evaluation of the finished amalgam and composite restorations. Bite blocks may be used during treatment, but the patient may not travel to the Evaluation Station with a bite block in place under an isolation dam. Dam clamps are prohibited on patients taking oral bisphosphonates; in such cases, the dam should be retained by ligation. The isolation dam must be placed by the candidate and not the assistant.

Cavity sealers/liners/bases. The candidate must decide if a treatment liner or base is indicated, and if so, check the liner/base request box on the appropriate Progress Form prior to sending the patient in to the Evaluation Station for evaluation of the preparation. Liners will be required only in very deep preparations to cover areas immediately impacting pulpal health and integrity. Failure to request a liner in this circumstance will result in penalties.

The examiners in the Evaluation Station will either approve or disapprove the placement of the liner or base as part of the evaluation of the preparation. The examiner will indicate his/her decision by placing his/her examiner number in either the *Granted* or *Not Granted* box next to the request. If the liner/base is granted, the candidate should place it and then summon the CFE to check its placement before continuing with the final restoration. If the examiners in the Evaluation Station, during grading of the final preparation, make a determination that a liner/base is indicated and has not been requested by the candidate, an Instruction to Candidate Form will be issued to ask that the candidate place the liner/base. In this instance, the liner/base in must also be checked by the CFE. In either case, if the CFE finds the insertion of the liner/base to be defective, the patient must be sent to the Express Chair evaluators for

assessment along with the Progress Form (with a red dot affixed to the top left of the form) prior to any alteration and before permission is given to insert the restoration.

If a liner or base is placed, it must fulfill the following criteria:

1. The liner must be placed only in those pulpal and/or axial wall areas that deviate from the established ideal depth.
2. The liner must not be placed on enamel or within 1 mm of any cavosurface margin.
3. The liner must not compromise the internal retentive and resistance features of the cavity preparation.
4. The liner must not be subject to dislodgement during placement of the permanent restoration.
5. Placement must reflect consideration of limitations of the materials used.

Caries detector. Caries detector liquid may be used. If used, it must be completely removed prior to the submission of the preparation for evaluation.

Pulpal exposure. If a pulpal exposure occurs, write in the *Notes* section on the back of the Progress Form that a pulpal exposure has occurred, indicate the time and briefly describe how the situation should be treated. Then call a CFE, who will consult with other examiners to determine the appropriate course of treatment.

Recontouring. Recontouring of adjacent teeth or restorations is allowed only after the preparation has been evaluated and only with the approval of a CFE. Candidates must enter the request to recontour the adjacent tooth in the *Additional Comments* section on the back of the Progress Form. A CFE must then review the situation and will place his/her examiner number and the time next to the request. The candidate may then restore the tooth after the CFE checks the adjacent tooth recontouring.

Instructions to candidates. Evaluators may provide written instructions to candidates if they believe a treatment should be modified during the course of the examination. When the patient returns from the Evaluation Station, if the candidate does not receive an Instruction to Candidate Form, the candidate should continue to the next step of the treatment. If the candidate **does** receive an Instruction to Candidate Form, it should be delivered by a CFE. The CFE will review the instructions with the candidate, and both the candidate and CFE will sign the form to indicate that the candidate understands the instructions. The corrections must be completed as stated on the form and checked by a CFE.

Modification Requests

If, during the preparation, it is evident that the tooth requires a significant deviation from the criteria outlined for a *Satisfactory* preparation, the candidate should make a modification request(s) prior to proceeding with the modification or extending the preparation for caries or decalcified enamel removal.

(Exception: modification to extend the proximal box because of tooth rotation or position does not require a Modification Request Form. Document this modification in the *Additional Comments* area on the back side of the Progress Form and request a CFE to initial it.)

All preexisting restorative material in the new preparation must be removed prior to submission of a Modification Request Form. If removing preexisting restorative material will result in a preparation that extends beyond *Satisfactory*-level criteria, a CFE must be called to evaluate the preparation prior to removal of the additional restorative material; the CFE will document and initial the modification on the back side of the Progress Form. In addition, if a candidate anticipates a carious (or mechanical) pulpal exposure during the course of treatment, another Modification Request Form must also be submitted.

To request a modification, the candidate must briefly write each modification on the Modification Request Form provided to the candidate at orientation. The request for each modification should include:

- **What** is the candidate requesting to do? (Type of modification)

- **Where**? (e.g., gingival axial line angle, mesial box)
- **How Much** is to be removed? (e.g., gingival axial line angle, mesial box)
- **Why** is the modification needed? (e.g., due to caries, decalcification)

If any of the four spaces for modification requests are not needed, mark the "No Request" bubble so the computer can skip the corresponding item. The candidate must also place a red dot (also provided at orientation) in the designated circle at the top-left of the Progress Form to indicate a requested modification.

A request for modification may be denied on the basis of any one of the parts of the request. For example, if a candidate's request to "extend the box; to the lingual; 2 mm; to remove caries" is denied, he/she should not assume that the request was denied because there are no caries. The denial may be because the request to remove 2 mm is excessive.

The patient, with an isolation dam in place and all required materials, is sent to the Coordinator Desk and on to the Express Chair for review of the Modification Request. The following materials must be sent with the patient:

- (On top of the other items) the appropriate Anterior or Posterior Restoration Progress Form with a red dot on the top-left of the form
- A Modification Request Form (completed as described above)
- Medical History Form, Patient Consent Form and color-coded cubicle ID card
- Instruments:
    - Fine and sharp traditional explorer (cowhorn, pigtail, or 11/12 explorer)
    - Metal periodontal probe with 1 mm markings
    - Clear mirror (unscratched, untinted, non-disposable)
    - Cotton plier
- Napkin

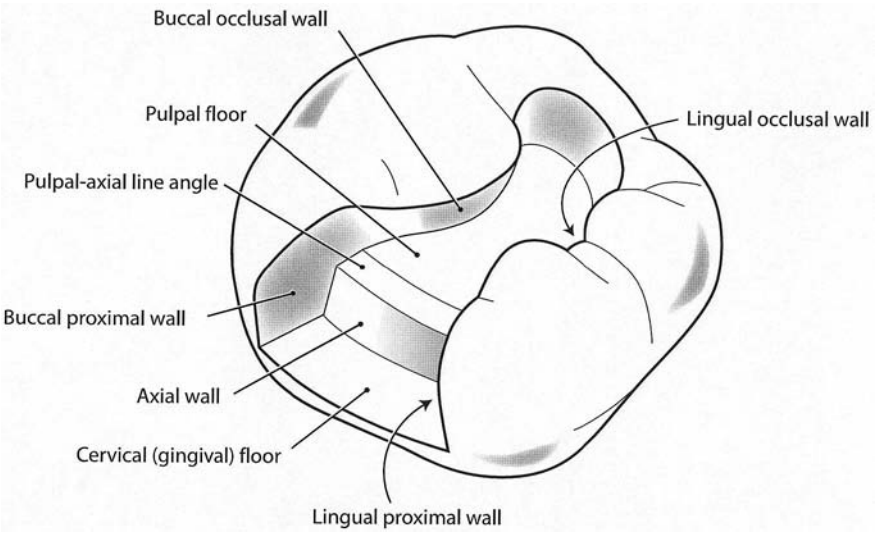
At the Express Chair, the examiner(s) will either approve or disapprove the request for modification. The examiners will place a green dot over the red dot on the Progress Form to indicate that they have assessed the request, and the forms and patient will be returned to the candidate by a CFE. A copy of the Modification Request Form will be returned to the candidate by the CFE to indicate whether the modification(s) has been granted or not granted.

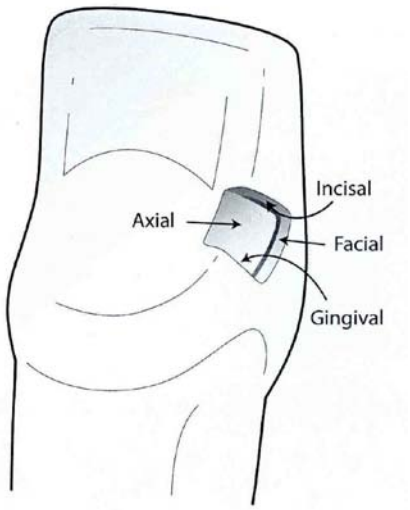
Carefully review the criteria for modification requests. Inappropriate requests for modification(s) will result in a small penalty for each modification not granted. A larger penalty will be assigned for requests for a modification for removal of caries or decalcification when no caries or decalcification exists or for repeated modification requests in an apparent attempt to have the examiners confirm when all caries are removed. Modifications that have been approved and appropriately accomplished will not result in any penalties. Regardless of whether the modification is granted or not granted, the candidate must complete the preparation and send the patient back to the Evaluation Station for evaluation of the final completed preparation.

If the candidate subsequently has additional requests for modification on the same preparation, a new red dot is placed over the green dot on the Progress Form, and the same procedure is followed. If more than one modification is anticipated at any time, it is to the candidate's advantage to submit them at the same time, as no additional time is provided for evaluation of modification requests, and multiple submissions may significantly decrease treatment time.

Once all approved modifications are completed, the patient and all required papers and instruments are submitted to the Evaluation Station for evaluation of the final preparation.

Terminology to be used when requesting modifications





Restorative Procedure and Patient Management Guidelines

Final evaluation of the preparation. When a patient is sent to the Evaluation Station, the prepared tooth must be isolated by an isolation dam. (To be properly isolated, at least one tooth on either side of the prepared tooth must be included under the isolation dam unless it is the most posterior tooth.) Candidate requests for a liner or base must be filled out on the appropriate Progress Form.

An instrument tray containing the following items must be sent with the patient:

- Completed Medical History Form
- Signed Patient Consent Form
- Amalgam or Composite Progress Form with properly mounted radiographs
- Color-coded cubicle ID card
- Instruments
    - Fine and sharp traditional explorer (cowhorn, pigtail, or 11/12 explorer)
    - Metal periodontal probe with 1 mm markings
    - Clear mirror (unscratched, untinted, non-disposable)

    - Cotton plier
- Napkin

Note: The instruments must be placed on the tray and covered with the napkin, fluid-resistant side down. The Progress Form, Medical History Form, radiographs and color-coded cubicle ID card must be placed on top.

Three independent examiners will evaluate the prepared cavity. If modifications of the preparation are required prior to restoration, the examiners will complete an Instruction to Candidate Form and return it to the candidate with the patient. If a candidate receives an Instruction to Candidate Form, he/she must follow the instructions. The candidate must not request an opinion from CFEs concerning the instructions on the Instruction to Candidate Form. If the instructions are to temporize the tooth, the chief examiner must be notified and a Follow-Up Form completed.

Final evaluation of the restoration. For the Class II amalgam restoration, the amalgam must be sufficiently set to allow a check of the occlusion. Any of the composite restorations must be presented without any surface glaze/sealer on the restoration. After removing the isolation dam and any wedges placed during treatment, the candidate should send the patient to the Evaluation Station with a tray containing

- Completed Medical History Form
- Patient Consent Form
- Amalgam or Composite Progress Form with properly mounted radiographs
- Color-coded cubicle ID card
- Instruments/Materials
    - Fine and sharp traditional explorer (cowhorn, pigtail, or 11/12 explorer)
    - #4 or #5 front-surface mirror (unscratched, untinted, non-disposable)
    - Cotton plier
    - Unwaxed dental floss
    - Articulating paper
- Napkin

If adjustments to the restoration are required, an Instruction to Candidate Form will be issued. Candidates must perform the corrections as instructed. Please note that the second restorative preparation may not be started by the candidate until the first restorative patient is dismissed (that is, after the completed restoration has been evaluated and any required modifications have been completed by the candidate and approved by a CFE).

If the final restoration is unacceptable, the candidate will receive an Instruction to Candidate Form and will be instructed to remove the restoration and temporize the tooth. Before this additional treatment is started, a CFE and the chief examiner must be notified. The patient, the candidate, a CFE and the chief examiner will meet to confirm that the responsibility for further treatment is understood and that the patient will be cared for properly. A Follow-Up Form will be issued to the candidate. When treatment is completed, the CFE will be called to check the provisional restoration before the patient is dismissed. Any restoration left in place at the discretion of the chief examiner does not indicate a *Satisfactory* restoration. If temporization occurs on the first restorative procedure, the candidate will be dismissed from the examination before attempting the second restorative procedure and will fail the Restorative Section.

Any post-examination treatment required as a result of treatment rendered during the examination process is the responsibility of the candidate and will be completed at the expense of the candidate. A Follow-Up Form must be completed to indicate the follow-up treatment required and clarify responsibility for the treatment. If the candidate receives no communication from the examiners in the Evaluation Station, a CFE should be notified before the patient is dismissed.

Requirements for the Class III Composite Preparation and Restoration

1. The tooth selected for the Class III composite restoration must be a permanent anterior tooth that meets the following requirements:

    - At least one proximal primary carious lesion that shows no signs of previous excavation and appears, radiographically or clinically,to extend to the DEJ.

      OR

    - A defective restoration, defined as one that exhibits recurrent caries or a defective cavosurface margin that, even though it may not yet be carious, can be penetrated with an explorer. (A mismatched shade is not an acceptable indication.) Existing defective restorations must be completely removed before submitting the patient to the Evaluation Station for a modification request or evaluation of the completed preparation.
    - There must be visually closed contact with the adjacent tooth on the proximal surface to be restored, although the area to be restored may or may not be in contact.
    - The approximating contact of the adjacent tooth must be natural tooth structure or a permanent restoration.
    - There may be a lesion on the proximal surface of the adjacent tooth, provided that there is no breakdown of the contact before or during the preparation that would jeopardize proximal contour or contact of the restoration.
    - Occlusion may or may not be present.

2. Lesions that may initially be described as Class IV will **not** be accepted. However, Class III lesions that may require modifications resulting in Class IV restorations are acceptable.
3. Lingual dovetails are acceptable when appropriately used.
4. Surface sealants must not be placed on the finished composite restoration.

Requirements for Class II Amalgam Preparation and Restoration

1. The amalgam must be a Class II restoration, and the tooth selected for the amalgam restoration must be a permanent posterior tooth that meets these requirements:
    - At least one proximal surface being restored must have a primary carious lesion that shows no signs of being previously excavated and appears, radiographically or clinically, to extend at least to the DEJ.
    - The tooth must be in contact with a sound enamel surface or a permanently restored surface of an adjacent tooth.
    - There may be a lesion on the proximal surface of the adjacent tooth, provided that there is no breakdown of the contact before or during the preparation that would jeopardize proximal contour or contact of the finished restoration.
    - When in centric occlusion, the selected tooth must be in cusp/fossa occlusion with an opposing tooth or teeth. Those opposing tooth/teeth may be natural dentition, a fixed bridge or any permanent artificial replacement thereof.
2. Other surfaces of the selected tooth may have an existing occlusal or proximal restoration, as long as there is a qualified surface with primary caries. Preexisting restorations and any underlying liner must be entirely removed, and the preparation must demonstrate acceptable principles of cavity preparation. An MOD treatment selection must have at least one proximal contact to be restored. In the event of a defect that would qualify as an acceptable lesion on the proximal surface opposite from the surface with primary caries, the treatment plan must be an MOD unless there is an intact transverse or oblique ridge.
3. The condensed and carved amalgam surface should **not** be polished or altered by abrasive rotary instrumentation except for the purpose of adjusting occlusion. Proximal contact is a critical part of the evaluation, and the candidate should be aware that the examiners will be checking the contact with floss. Please note that, for this examination, proximal contacts must be **visibly** closed. Some resistance to the passage of floss is not sufficient for judging a contact to be closed. Also, contacts must not prevent floss from passing through. Proximal contacts that are not visibly closed or that do not permit the passage of floss are evaluated as *Critical Deficiencies.* The candidate must be familiar with the properties of the amalgam being used and should be sure to allow sufficient time for the amalgam to set before sending the finished restoration to the Evaluation Station. A developed and mounted post-operative bitewing **may** be requested at any time at the discretion of the examiners.

Requirements for Class II Composite Preparation and Restoration

1. The tooth selected for the Class II composite restoration must be a permanent posterior tooth that meets the following requirements:

- At least one proximal surface being restored must have a primary carious lesion that shows no signs of being previously excavated and appears, radiographically or clinically, to extend at least to the DEJ.
- The tooth must be in contact with a sound enamel surface or a permanently restored surface of an adjacent tooth.
- There should be evidence of caries and/or an existing occlusal restoration on the occlusal surface of the tooth that warrants extending the preparation across the occlusal surface.
- There may be a lesion on the proximal surface of the adjacent tooth, provided that there is no breakdown of the contact before or during the preparation that would jeopardize proximal contour or contact of the finished restoration.
- When in centric occlusion, the selected tooth must be in cusp/fossa occlusion with an opposing tooth or teeth. Those opposing tooth/teeth may be natural dentition, a fixed bridge or any permanent artificial replacement thereof.

2. Other surfaces of the selected tooth may have an existing occlusal or proximal restoration, as long as there is a qualified surface with primary caries. Preexisting restorations and any underlying liner must be entirely removed, and the preparation must demonstrate acceptable principles of cavity preparation. An MOD treatment selection must have at least one proximal contact to be restored. In the event of a defect that would qualify as an acceptable lesion on the proximal surface opposite from the surface with primary caries, the treatment plan must be an MOD unless there is an intact transverse or oblique ridge.

Requirements for Posterior Proximal Occlusal Composite Preparation and Restoration

The tooth selected for the posterior proximal occlusal (slot) composite restoration must be a permanent posterior tooth that meets the following requirements:

- At least one proximal surface being restored must have a primary carious lesion that shows no signs of being previously excavated and appears, radiographically or clinically, to extend at least to the DEJ.
- The tooth must be in contact with a sound enamel surface or a permanently restored surface of an adjacent tooth.
- The occlusal surface of the tooth must have no caries and/or any previous restorations must not require restoration.
- There may be a lesion on the proximal surface of the adjacent tooth, provided that there is no breakdown of the contact before or during the preparation that would jeopardize proximal contour or contact of the finished restoration.
- When in centric occlusion, the selected tooth must be in cusp/fossa occlusion with an opposing tooth or teeth. Those opposing tooth/teeth may be natural dentition, a fixed bridge or any permanent artificial replacement thereof.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE PREPARATION
External Outline Form

SATISFACTORY

1. Outline form provides adequate access for complete removal of caries and/or previous restorative material and for insertion of composite resin. Access entry is appropriate to the location of caries and tooth position.
2. The gingival contact must be broken. The incisal contact need not be broken, unless indicated by the location of the caries. If a lingual approach is initiated, facial contact may or may not be broken as long as the margin terminates in sound tooth structure.
3. Cavosurface margins form a smooth, continuous curve with no sharp angles.
4. Cavosurface margins terminate in sound natural tooth structure. There is no previous restorative material, including sealants, at the cavosurface margin. All unsupported enamel is removed unless it compromises facial esthetics.
5. Enamel cavosurface margins may be beveled.

MINIMALLY ACCEPTABLE

1. The wall opposite the access, if broken, may extend no more than 1 mm beyond the contact area.
2. The gingival clearance does not exceed 1.5 mm.
3. The outline form is over-extended mesiodistally 0.5-1 mm beyond what is necessary for complete removal of caries and/or previous restorative material.
4. The cavosurface margins are slightly irregular.
5. There is a small area of unsupported enamel, which is not necessary to preserve facial esthetics.
6. Enamel cavosurface margin bevels, if present, do not exceed 1 mm in width.

MARGINALLY SUBSTANDARD

1. The outline form is under-extended, making caries removal or insertion of restorative material questionable.
2. The outline form is over-extended mesiodistally by more than 1 mm but no more than 2 mm beyond what is necessary for complete removal of caries and/or previous restorative material.
3. The incisal cavosurface margin is over-extended so that the integrity of the incisal angle is compromised.
4. The wall opposite the access opening extends more than 1 mm beyond the contact area.
5. The gingival clearance is greater than 1.5 mm.
6. Gingival contact is not visually broken.
7. The cavosurface margin is rough and severely irregular.
8. The cavosurface margin does not terminate in sound natural tooth structure, or there is explorer-penetrable decalcification or previous restorative material remaining on the cavosurface margins.
9. There are large or multiple areas of unsupported enamel that are not necessary to preserve facial esthetics.
10. Enamel cavosurface margin bevels, if present, exceed 1 mm in width, are not uniform or are inappropriate for the size of the restoration.

CRITICAL DEFICIENCY

1. The outline form is under-extended, making it impossible to manipulate and finish the restorative material.
2. The outline form is over-extended mesiodistally by more than 2 mm beyond what is necessary for complete removal of caries and/or previous restorative material.
3. The incisal cavosurface margin is over-extended so that the incisal angle is removed or fractured. A Class IV restoration is now necessary without prior justification.
4. The gingival clearance is greater than 2 mm.
5. The wall opposite the access opening extends more than 2.5 mm beyond the contact area.
6. There are caries remaining.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE PREPARATION
Internal Form

SATISFACTORY

1. The axial wall follows the external contours of the tooth, and the depth should not exceed 0.5 mm beyond the DEJ.
2. All prepared surfaces are smooth and well defined.
3. If used, rounded internal retention is placed in the dentin of the gingival and incisal walls just axial to the DEJ as dictated by cavity form. Retention is observed tactilely and visually.
4. All carious tooth structure and/or previous restorative materials are removed.

MINIMALLY ACCEPTABLE

1. The depth of the axial wall is no more than 1.5 mm beyond the DEJ.
2. The internal walls are slightly rough and irregular.

MARGINALLY SUBSTANDARD

1. The depth of the axial wall is deeper than 1.5 mm beyond the DEJ.
2. When used, retention is excessive and undermines enamel, jeopardizes the incisal angle or encroaches on the pulp.
3. The internal walls are rough and irregular.

CRITICAL DEFICIENCY

1. Caries or previous restorative material remains.
2. The axial wall is more than 2.5 mm beyond the DEJ.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE PREPARATION
Treatment Management

SATISFACTORY

1. The isolation dam is adequate to isolate sufficient teeth for visibility and accessibility with no debris, saliva or hemorrhagic leakage into the preparation. Ideally, the treated tooth and both proximal adjacent teeth should be isolated, if possible.
2. The patient has adequate anesthesia for pain control.
3. The adjacent teeth and/or restorations are free from damage.
4. The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. The isolation dam is inappropriately applied, torn and/or leaking, rendering the preparation unsuitable for evaluation or the subsequent manipulation of the restorative material.
2. There is inadequate anesthesia for pain control.
3. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or contour and/or contact.
4. There is iatrogenic soft tissue damage that is inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration.
2. There is gross iatrogenic damage to the soft tissue that is inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE FINISHED RESTORATION
Margin Integrity and Surface Finish

SATISFACTORY

1. There is no marginal excess (overhang) or deficiency. No marginal excess is detectable, either visually or with the tine of an explorer, at the restoration-tooth interface. There is no evidence of voids or open margins.
2. The surface of the restoration is uniformly smooth and free of pits and voids.
3. There is no evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. The restoration is bonded to the prepared tooth structure.
5. The shade of the restoration blends with the surrounding tooth structure.

MINIMALLY ACCEPTABLE

1. There is a marginal excess or deficiency at the restoration-tooth interface, detectable either visually or with the tine of an explorer, but it is no greater than 0.5 mm. There is no evidence of pits and voids at the cavosurface margin.
2. The surface of the restoration is slightly grainy or rough, but it is free of significant pits and voids.
3. There is minimal evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.

MARGINALLY SUBSTANDARD

1. The restoration-tooth interface is detectable visually or with the tine of an explorer. There is evidence of marginal excess or deficiency of more than 0.5 mm and up to 1 mm, including pits and voids at the cavosurface margin.
2. The surface of the restoration is rough and exhibits significant surface irregularities, pits or voids.
3. There is evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. There is flash with contamination, but the contamination is not internal to the cavosurface margin and could be removed by polishing or finishing.
5. The shade of the restoration contrasts markedly with the surrounding tooth structure.

CRITICAL DEFICIENCY

1. There is evidence of marginal excess or deficiency of more than 1 mm, including pits and voids at the cavosurface margin, or there is an open margin.
2. There is internal contamination at the interface between the restoration and the tooth.
3. The restoration is debonded and/or movable in the preparation.
4. There is gross enameloplasty resulting in the exposure of dentin.
5. The restoration is fractured.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE FINISHED RESTORATION
Contour, Contact and Occlusion

SATISFACTORY

1. Interproximal contact is present, the contact is visually closed and is properly shaped and positioned and there is definite, but not excessive, resistance to dental floss when passed through the interproximal contact area.
2. When checked with articulating ribbon or paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth in that quadrant.
3. The restoration reproduces the normal physiological proximal contours of the tooth, lingual anatomy and marginal ridge anatomy.

MINIMALLY ACCEPTABLE

1. Interproximal contact is visually closed, and the contact is adequate in size, shape or position but demonstrates little resistance to dental floss.
2. The restoration does not reproduce the normal lingual anatomy, proximal contours of the tooth or marginal ridge anatomy but would not be expected to adversely affect the tissue health.

MARGINALLY SUBSTANDARD

1. Interproximal contact is visually closed, but the contact is deficient in size, shape or position and demonstrates little resistance to dental floss or shreds the floss.
2. Interproximal contact is visually open, but the tooth already lacked proximal contact at the time of assignment. The final restoration demonstrates physiologic contour.
3. When checked with articulating ribbon or paper, the restoration is in hyperocclusion inconsistent in size, shape and intensity with the contacts on surrounding teeth. The restoration requires adjustment.
4. The restoration does not reproduce the normal lingual anatomy, proximal contours of the tooth or marginal ridge anatomy and would be expected to adversely affect the tissue health.

CRITICAL DEFICIENCY

1. The interproximal contact is visually open or will not allow floss to pass through the contact area.
2. There is gross hyperocclusion so that the restoration is the only point of occlusion in that quadrant.

SCORING CRITERIA: ANTERIOR CLASS III COMPOSITE FINISHED RESTORATION
Treatment Management

SATISFACTORY

1. The patient demonstrates no post-operative discomfort that is inconsistent with the procedure.
2. The adjacent and/or opposing hard tissue is free from evidence of damage and/or alteration.
3. The soft tissue is free from damage, or there is soft tissue damage consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. The patient demonstrates discomfort inconsistent with the procedure.
2. Adjacent and/or opposing hard tissue shows evidence of damage and/or alteration inconsistent with the procedure.
3. There is iatrogenic damage to the soft tissue inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.
2. There is gross iatrogenic trauma to the soft tissue inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: CLASS II AMALGAM PREPARATION
External Outline Form

SATISFACTORY

1. Contact is visibly open up to 0.5 mm proximally and gingivally.
2. The proximal gingival point angles may be rounded or sharp.
3. The isthmus must be 1-2 mm wide, but not more than one-fourth the intercuspal width of the tooth.
4. The external cavosurface margin meets the enamel at 90°. There are no gingival bevels. The gingival floor is flat, smooth and perpendicular to the long axis of the tooth.
5. The outline form includes all carious and non-coalesced fissures and is smooth, rounded and flowing.
6. The cavosurface margin terminates in sound natural tooth structure. There is no previous restorative material, including sealants, at the cavosurface margin. There is no decalcification on the gingival margin.

MINIMALLY ACCEPTABLE

1. Contact is visibly open when viewed proximally, and proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 0.5 mm but not greater than 2 mm.
3. The isthmus is more than one-fourth and not more than one-third of the intercuspal width.
4. The proximal cavosurface margin deviates from 90° but is unlikely to jeopardize the longevity of the tooth or restoration; this includes small areas of unsupported enamel.

MARGINALLY SUBSTANDARD

1. The gingival floor and/or proximal contact is not visually open, or proximal clearance at the height of contour extends beyond 1.5 mm but not more than 2.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 2 mm but not more than 3 mm or is not visually open.
3. The outline form is inappropriately over-extended so that it compromises the remaining marginal ridge and/or cusp(s). The outline form is under-extended, and remaining non-coalesced fissure(s) extend to the DEJ and are contiguous with the outline form.
4. The isthmus is less than 1 mm or greater than ⅓ the intercuspal width.
5. The proximal cavosurface margin deviates from 90° and is likely to jeopardize the longevity of the tooth or restoration. This includes unsupported enamel and/or excessive bevel(s).
6. The cavosurface margin does not terminate in sound natural tooth structure, or there is explorer penetrable decalcification remaining on the cavosurface margin, or the cavosurface margin terminates in previous restorative material.
7. There is explorer-penetrable decalcification remaining on the gingival floor.

CRITICAL DEFICIENCY

1. The proximal clearance at the height of contour extends beyond 3 mm on either one or both proximal walls.
2. The gingival clearance is greater than 3 mm.
3. The isthmus is greater than one-half the intercuspal width.
4. The outline form is over-extended so that it compromises, undermines and leaves unsupported the remaining marginal ridge to the extent that the pulpal-occlusal wall is unsupported by dentin or the width of the marginal ridge is 1 mm or less.

SCORING CRITERIA: CLASS II AMALGAM PREPARATION
Internal Form

SATISFACTORY

1. The axial wall is 0.5 mm from the DEJ, follows the external contours of the tooth and is entirely in dentin.
2. The pulpal floor depth should be 0.5 mm beyond the DEJ in all areas.
3. The pulpal-axial line angle is rounded.
4. All caries and/or previous restorative material are removed.
5. When used, retention is well defined, in dentin and does not undermine enamel.
6. The walls of the proximal box should be convergent occlusally and meet the external surface at a 90° angle.

MINIMALLY ACCEPTABLE

1. The pulpal floor depth is 0.5 mm to 1.5 mm beyond the DEJ.
2. The depth of the axial wall is 0.5 mm to 1.5 mm beyond the DEJ.
3. The pulpal-axial line angle is sharp.
4. The walls of the proximal box are parallel, but appropriate internal retention is present.

MARGINALLY SUBSTANDARD

1. Enamel remains on the axial wall.
2. The axial wall is more than 1.5mm beyond the DEJ.
3. The pulpal floor is not entirely in dentin and island(s) of enamel are evident. The pulpal floor is more than 1.5 mm beyond the DEJ.
4. Retention, when used, undermines the enamel or may compromise the tooth or restoration.
5. The walls of the proximal box diverge occlusally, which is likely to jeopardize the longevity of the tooth or restoration.

CRITICAL DEFICIENCY

1. The axial wall is more than 2.5 mm beyond the DEJ.
2. The pulpal floor is more than 2.5 mm beyond the DEJ or entirely in enamel.
3. Caries or previous restorative material remains in the preparation.
4. Retention, when used, grossly compromises the tooth or restoration.
5. The walls of the proximal box diverge occlusally, offering no retention and jeopardizing the longevity of the tooth or restoration.

SCORING CRITERIA: CLASS II AMALGAM PREPARATION
Treatment Management

SATISFACTORY

1. The isolation dam is adequate to isolate sufficient teeth for visibility and accessibility and has no debris, salivary or hemorrhagic leakage into the preparation. Ideally, the treated tooth and both proximal adjacent teeth should be isolated, if possible.
2. The patient has received adequate anesthesia for pain control.
3. The adjacent teeth and/or restorations are free from damage.
4. The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. The isolation dam is inappropriately applied, torn and/or leaking, resulting in debris, saliva and/or hemorrhage leakage, rendering the preparation unsuitable for evaluation or the subsequent manipulation of the restorative material.
2. There is inadequate anesthesia for pain control.
3. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or contour and/or contact.
4. There is iatrogenic soft tissue damage that is inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration.
2. There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: CLASS II AMALGAM FINISHED RESTORATION
Margin Integrity and Surface Finish

SATISFACTORY

1. No marginal excess or deficiency is detectable, either visually or with the tine of an explorer, at the restoration-tooth interface.. There is no evidence of voids or open margins.
2. The surface of the restoration is uniformly smooth and free of pits and voids.
3. There is no evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.

MINIMALLY ACCEPTABLE

1. A marginal excess or deficiency is detectable, either visually or with the tine of an explorer, at the restoration-tooth interface, , but it is no greater than 0.5 mm. There is no evidence of pits and voids at the cavosurface margin.
2. The surface of the restoration is slightly grainy or rough, but it is free of significant pits and voids.
3. There is minimal evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration (enameloplasty).

MARGINALLY SUBSTANDARD

1. A marginal excess or deficiency is detectable visually or with the tine of an explorer, and the discrepancy is greater than 0.5 mm and up to 1 mm, including pits and voids at the cavosurface margin.
2. The surface of the restoration is rough and exhibits significant surface irregularities, pits or voids.
3. There is evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration (enameloplasty).

CRITICAL DEFICIENCY

1. There is evidence of marginal excess or deficiency of more than 1 mm, including pits and voids at the cavosurface margin, and/or there is an open margin.
2. The restoration is fractured.
3. There is gross enameloplasty resulting in the exposure of dentin.

SCORING CRITERIA: CLASS II AMALGAM FINISHED RESTORATION
Contour, Contact and Occlusion

SATISFACTORY

1. Interproximal contact is present. The contact is visually closed and properly shaped and positioned. There is definite, but not excessive, resistance to dental floss when passed through the interproximal contact area.
2. When checked with articulating ribbon or paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth in that quadrant.
3. The restoration reproduces the normal physiological proximal contours of the tooth, occlusal anatomy and marginal ridge anatomy.

MINIMALLY ACCEPTABLE

1. Interproximal contact is visually closed, and the contact is adequate in size, shape or position but demonstrates little resistance to dental floss.
2. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy but would not be expected to adversely affect the tissue health.

MARGINALLY SUBSTANDARD

1. Interproximal contact is visually closed, but the contact is deficient in size, shape or position and demonstrates little resistance to dental floss or shreds the floss.
2. When checked with articulating ribbon or paper, the restoration is in hyperocclusion inconsistent in size, shape and intensity with the occlusal contacts on surrounding teeth. The restoration requires adjustment.
3. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy, and would be expected to adversely affect the tissue health.

CRITICAL DEFICIENCY

1. The interproximal contact is visually open or will not allow floss to pass through the contact area.
2. There is gross hyperocclusion so that the restoration is the only point of occlusion in that quadrant.

SCORING CRITERIA: CLASS II AMALGAM FINISHED RESTORATION
Treatment Management

SATISFACTORY

1. The patient demonstrates no post-operative discomfort that is inconsistent with the procedure.
2. The adjacent and/or opposing hard tissue is free from evidence of damage and/or alteration.
3. The soft tissue is free from damage, or there is soft tissue damage consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. The patient demonstrates discomfort inconsistent with the procedure.
2. Adjacent and/or opposing hard tissue shows evidence of damage and/or alteration inconsistent with the procedure.
3. There is iatrogenic trauma to the soft tissue inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.
2. There is gross iatrogenic trauma to the soft tissue inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: POSTERIOR COMPOSITE PREPARATION
External Form

SATISFACTORY

1. Proximal contact is either closed or visibly open up to 0.5 mm. Gingival contact is visibly open up to 0.5 mm.
2. The outline form includes all carious and non-coalesced fissures and must be smooth, flowing and rounded with no sharp curves or angles.
3. The isthmus must be 1-2 mm in width, not to exceed one-fourth the intercuspal width of the tooth.
4. The external cavosurface margin should meet the enamel at 90^{o}. The gingival floor is flat, smooth and perpendicular to the long axis of the tooth.
5. The cavosurface margin terminates in sound tooth structure. There is no previous restorative material, including sealants, at the cavosurface margin.

MINIMALLY ACCEPTABLE

1. Proximal contact is visibly open, and proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 0.5 mm but not greater than 1 mm.
3. The outline form is sharp and irregular.
4. The isthmus is more than one-fourth and not more than one-third the intercuspal width.

MARGINALLY SUBSTANDARD

1. Proximal clearance at the height of contour extends beyond 1.5 mm but not more than 2.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 1 mm but not more than 2 mm.
3. The isthmus is less than 1 mm or greater than one-third the intercuspal width, up to one-half the intercuspal width.
4. The outline form is inappropriately over-extended so that it compromises the remaining marginal ridge and/or cusp(s).
5. The cavosurface margin does not terminate in sound natural tooth structure, there is explorer-penetrable decalcification remaining on the cavosurface margin or the cavosurface margin terminates in previous restorative material.
6. There are remaining non-coalesced fissure(s) that extend to the DEJ and are contiguous with the outline form.
7. The proximal cavosurface margin deviates from 90^{o} and is likely to jeopardize the longevity of the tooth or restoration. This includes unsupported enamel and/or excessive bevel(s).

CRITICAL DEFICIENCY

1. The proximal clearance at the height of contour extends beyond 2.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 2 mm.
3. The isthmus is greater than one-half the intercuspal width.
4. The outline form is grossly over-extended so that it compromises and undermines the remaining marginal ridge to the extent that the cavosurface margin is unsupported by dentin or the width of the marginal ridge is 0.5 mm or less.

SCORING CRITERIA: POSTERIOR COMPOSITE PREPARATION
Internal Form

SATISFACTORY

1. The axial wall follows the external contours of the tooth and includes the DEJ but does not exceed 0.5 mm beyond the DEJ.
2. The pulpal floor depth must be at least 1.5-2 mm in all areas; there may be remaining enamel.
3. All caries and/or previous restorative material are removed.
4. All prepared surfaces are smooth, rounded and well defined.
5. When used, retention is well defined, placed in dentin and does not undermine enamel.
6. The walls of the proximal box should be parallel or convergent occlusally.

MINIMALLY ACCEPTABLE

1. The pulpal floor depth is between 2 and 3 mm in all areas; there may be remaining enamel.
2. The depth of the axial wall is no more than 1.5 mm beyond the DEJ.
3. The walls of the proximal box are slightly divergent, but not likely to jeopardize the longevity of the tooth or restoration.

MARGINALLY SUBSTANDARD

1. The pulpal floor depth is less than 1.5 mm or greater than 3 mm, up to 4 mm.
2. The axial wall is more than 1.5 mm, but no more than 2.5 mm beyond the DEJ.
3. The walls of the proximal box are too divergent or too convergent (resulting in excessively undermined enamel).
4. Prepared surfaces are rough, sharp and irregular.
5. Retention, when used, undermines the enamel.

CRITICAL DEFICIENCY

1. The pulpal floor depth is 4 mm or greater from the cavosurface margin or is less than 0.5 mm.
2. The axial wall is more than 2.5 mm beyond the DEJ or is still in enamel and does not include the DEJ.
3. Caries or previous restorative material remains in the preparation.

SCORING CRITERIA: POSTERIOR COMPOSITE PREPARATION
Treatment Management

SATISFACTORY

1. The preparation is adequately isolated with no debris, salivary or hemorrhagic leakage in the preparation.
2. The patient has received adequate anesthesia for pain control.
3. The isolation dam is adequate to isolate sufficient teeth for visibility, accessibility and a dry preparation. Ideally, the treated tooth and both proximal adjacent teeth should be isolated, if possible.
4. The adjacent teeth and/or restorations are free from damage.
5. The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or contour and/or contact.
2. The isolation dam is inappropriately applied, torn and/or leaking, rendering the preparation unsuitable for evaluation or the subsequent manipulation of the restorative material.
3. There is inadequate anesthesia for pain control.
4. There is iatrogenic soft tissue damage that is inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration.
2. There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: POSTERIOR COMPOSITE FINISHED RESTORATION
Margin Integrity and Surface Finish

SATISFACTORY

1. There is no marginal excess (overhang) or deficiency. No marginal excess is detectable, either visually or with the tine of an explorer, at the restoration-tooth interface. There is no evidence of voids or open margins.
2. The surface of the restoration is uniformly smooth and free of pits and voids.
3. There is no evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. The restoration is bonded to the prepared tooth structure.
5. Shade selection matches surrounding tooth structure.

MINIMALLY ACCEPTABLE

1. A a marginal excess or deficiency is detectable, either visually or with the tine of an explorer, at the restoration-tooth interface, but it is no greater than 0.5 mm. There is no evidence of pits and voids at the cavosurface margin.
2. The surface of the restoration is slightly grainy or rough, but it is free of significant pits and voids.
3. There is minimal evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.

MARGINALLY SUBSTANDARD

1. The restoration-tooth interface is detectable visually or with the tine of an explorer. There is evidence of marginal excess or deficiency of greater than 0.5 mm and up to 1 mm, including pits and voids at the cavosurface margin.
2. The surface of the restoration is rough and exhibits significant surface irregularities, pits or voids.
3. There is significant evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. Shade selection does not match surrounding tooth structure.

CRITICAL DEFICIENCY

1. There is evidence of marginal excess or deficiency of more than 1 mm, including pits and voids at the cavosurface margin, and/or there is an open margin.
2. There is gross **enameloplasty** resulting in the exposure of dentin.
3. The restoration is debonded and/or movable in the preparation.
4. The restoration is fractured.

SCORING CRITERIA: POSTERIOR COMPOSITE FINISHED RESTORATION
Contour, Contact and Occlusion

SATISFACTORY

1. Interproximal contact is present. The contact is visually closed and is properly shaped and positioned. There is definite, but not excessive, resistance to dental floss when passed through the interproximal contact area.
2. When checked with articulating paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth in that quadrant.
3. The restoration reproduces the normal physiological proximal contours of the tooth, occlusal anatomy and marginal ridge anatomy.

MINIMALLY ACCEPTABLE

1. Interproximal contact is visually closed, and the contact appears adequate in size, shape or position but demonstrates little resistance to dental floss.
2. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy but would not be expected to adversely affect the tissue health.

MARGINALLY SUBSTANDARD

1. Interproximal contact is visually closed, but the contact is deficient in size, shape or position and demonstrates little resistance to dental floss or shreds the floss.
2. When checked with articulating paper, the restoration is in hyperocclusion inconsistent in size, shape and intensity with the occlusal contacts on surrounding teeth. The restoration requires adjustment.
3. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy and would be expected to adversely affect the tissue health.

CRITICAL DEFICIENCY

1. The interproximal contact is visually open or will not allow floss to pass through the contact area.
2. There is gross hyperocclusion, such that the restoration is the only point of occlusion in that quadrant.

SCORING CRITERIA: POSTERIOR COMPOSITE FINISHED RESTORATION
Treatment Management

SATISFACTORY

1. The adjacent and/or opposing hard tissue is free from evidence of damage and/or alteration.
2. The patient demonstrates no post-operative discomfort that is inconsistent with the procedure.
3. The soft tissue is free from damage, or there is soft tissue damage consistent with the procedure.

MINIMALLY ACCEPTABLE

1. There is minimal damage to adjacent tooth/teeth that can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. There is iatrogenic damage to the soft tissue inconsistent with the procedure.
2. Adjacent and/or opposing hard tissue shows evidence of damage and/or alteration inconsistent with the procedure.
3. The patient demonstrates discomfort inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross iatrogenic damage to the soft tissue inconsistent with the procedure.
2. There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE PREPARATION
External Form

SATISFACTORY

1. Proximal contact is either closed or visibly open up to 0.5 mm. Gingival contact is visibly open up to 0.5mm.
2. The outline form must be smooth, flowing and rounded with no sharp curves or angles.
3. The external cavosurface margin meets the enamel at 90^{o}. The gingival floor is flat, smooth and perpendicular to the long axis of the tooth.
4. The cavosurface margin terminates in sound tooth structure. There is no previous restorative material, including sealants, at the cavosurface margin.

MARGINALLY SUBSTANDARD

1. Proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 0.5 mm but not greater than 1 mm.
3. Outline form is irregular and sharp.

MARGINALLY SUBSTANDARD

1. Proximal clearance at the height of contour extends beyond 1.5 mm but not more than 2.5 mm on either one or both proximal walls.
2. The gingival clearance is greater than 1 mm but not more than 2 mm.
3. The outline form is inappropriately **over-extended** so that it compromises the cusp(s).
4. The cavosurface margin does not terminate in sound natural tooth structure, or there is explorer-penetrable decalcification remaining on the cavosurface margin, or the cavosurface margin terminates in previous restorative material.
5. The proximal cavosurface margin deviates from 90^{o} and is likely to jeopardize the longevity of the tooth or restoration. This includes unsupported enamel and/or excessive bevel(s).

CRITICAL DEFICIENCY

1. The proximal clearance at the height of contour extends beyond 3 mm on either one or both proximal walls.
2. The gingival clearance is greater than 2 mm. The outline form is grossly over-extended so that it compromises and undermines the remaining cusp(s) to the extent that the cavosurface margin is unsupported by dentin.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE PREPARATION
Internal Form

SATISFACTORY

1. The axial wall follows the external contours of the tooth and includes the DEJ but should not exceed 0.5 mm beyond the DEJ.
2. The proximal walls should be parallel or convergent occlusally.
3. All caries and/or previous restorative material are removed.
4. All prepared surfaces are smooth, rounded and well defined.
5. When used, retention is well defined, placed in dentin and does not undermine enamel.

MINIMALLY ACCEPTABLE

1. The depth of the axial wall is no more than 1.5 mm from the DEJ.
2. The proximal walls are slightly divergent but not likely to jeopardize the longevity of the tooth or restoration.

MARGINALLY SUBSTANDARD

1. The axial wall is more than 1.5 mm up to 2.5 mm beyond the DEJ.
2. The proximal walls are too divergent or too convergent (resulting in excessively undermined enamel).
3. Prepared surfaces are rough, sharp and irregular.
4. Retention, when used, undermines the enamel.
5. The internal retentive features may be inadequate and may compromise the tooth or restoration.

CRITICAL DEFICIENCY

1. The axial wall is more than 2.5 mm beyond the DEJ or is still in enamel and does not include the DEJ.
1. Caries or previous restorative material remains in the preparation.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE PREPARATION
Treatment Management

SATISFACTORY

1. The preparation is adequately isolated with no debris, salivary or hemorrhagic leakage in the preparation.
2. The patient has adequate anesthesia for pain control.
3. The isolation dam is adequate to isolate sufficient teeth for visibility, accessibility and a dry preparation. Ideally, the treated tooth and both proximal adjacent teeth should be isolated, if possible.
4. The adjacent teeth and/or restorations are free from damage.
5. The soft tissue is free from damage, or there is tissue damage that is consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. Damage to adjacent tooth/teeth requires recontouring that changes the shape and/or contour and/or contact.
2. The isolation dam is inappropriately applied, torn and/or leaking, rendering the preparation unsuitable for evaluation or the subsequent manipulation of the restorative material.
3. There is inadequate anesthesia for pain control.
4. There is iatrogenic soft tissue damage that is inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross damage to adjacent tooth/teeth, requiring a restoration.
2. There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and preexisting condition of the soft tissue.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE
FINISHED RESTORATION
Margin Integrity and Surface Finish

SATISFACTORY

1. There is no marginal excess (overhang) or deficiency. There is no detectable marginal excess at the restoration-tooth interface, either visually or with the tine of an explorer. There is no evidence of voids or open margins.
2. The surface of the restoration is uniformly smooth and free of pits and voids.
3. There is no evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. The restoration is bonded to the prepared tooth structure.
5. Shade selection matches surrounding tooth structure.

MINIMALLY ACCEPTABLE

1. There is a marginal excess or deficiency at the restoration-tooth interface detectable either visually or with the tine of an explorer, but it is no greater than 0.5 mm. There is no evidence of pits and voids at the cavosurface margin.
2. The surface of the restoration is slightly grainy or rough, but it is free of significant pits and voids.
3. There is minimal evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.

MARGINALLY SUBSTANDARD

1. The restoration-tooth interface is detectable visually or with the tine of an explorer. There is evidence of marginal excess or deficiency of greater than 0.5 mm and up to 1 mm, including pits and voids at the cavosurface margin.
2. The surface of the restoration is rough and exhibits significant surface irregularities, pits or voids.
3. There is evidence of unwarranted or unnecessary removal, modification or recontouring of tooth structure adjacent to the restoration.
4. Shade selection does not match surrounding tooth structure.

CRITICAL DEFICIENCY

1. There is evidence of marginal excess or deficiency of more than 1 mm, including pits and voids at the cavosurface margin and/or there is an open margin.
2. There is gross **enameloplasty** resulting in the exposure of dentin.
3. The restoration is debonded and/or movable in the preparation.
4. The restoration is fractured.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE FINISHED RESTORATION
Contour, Contact and Occlusion

SATISFACTORY

1. Interproximal contact is present. The contact is visually closed and is properly shaped and positioned. There is definite, but not excessive, resistance to dental floss when passed through the interproximal contact area.
2. When checked with articulating paper, all centric and excursive contacts on the restoration are consistent in size, shape and intensity with such contacts on other teeth in that quadrant.
3. The restoration reproduces the normal physiological proximal contours of the tooth, occlusal anatomy and marginal ridge anatomy.

MINIMALLY ACCEPTABLE

1. Interproximal contact is visually closed, and the contact is adequate in size, shape or position but demonstrates little resistance to dental floss.
2. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy but would not be expected to adversely affect the tissue health.

MARGINALLY SUBSTANDARD

1. Interproximal contact is visually closed, but the contact is deficient in size, shape or position and demonstrates little resistance to dental floss or shreds the floss.
2. The restoration does not reproduce the normal occlusal anatomy, proximal contours of the tooth or marginal ridge anatomy and would be expected to adversely affect the tissue health.
3. When checked with articulating paper, the restoration is in hyperocclusion inconsistent in size, shape and intensity with the occlusal contacts on surrounding teeth. The restoration requires adjustment.

CRITICAL DEFICIENCY

1. The interproximal contact is visually open or will not allow floss to pass through the contact area.
2. There is gross hyperocclusion, such that the restoration is the only point of occlusion in that quadrant.

SCORING CRITERIA: POSTERIOR PROXIMAL OCCLUSAL COMPOSITE FINISHED RESTORATION
Treatment Management

SATISFACTORY

1. The adjacent and/or opposing hard tissue is free from evidence of damage and/or alteration.
2. The patient demonstrates no post-operative discomfort that is inconsistent with the procedure.
3. The soft tissue is free from damage, or there is soft tissue damage consistent with the procedure.

MINIMALLY ACCEPTABLE

1. Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.

MARGINALLY SUBSTANDARD

1. There is iatrogenic damage to the soft tissue inconsistent with the procedure.
2. Adjacent and/or opposing hard tissue shows evidence of damage and/or alteration inconsistent with the procedure.
3. The patient demonstrates discomfort inconsistent with the procedure.

CRITICAL DEFICIENCY

1. There is gross iatrogenic damage to the soft tissue inconsistent with the procedure.
2. There is evidence of gross damage and/or alteration to adjacent and/or opposing hard tissue inconsistent with the procedure.

Examination Check-Out

Check-Out Procedure for ALL Examination Sections

Upon completion of all examinations, candidates must personally submit all examination packets and typodonts to a central location determined by the chief examiner. The following items **must be submitted in the white envelope provided by NERB and accounted for prior to dismissal from the examination site:**

- Pre-operative and post-operative (if requested during the examination) radiographs of teeth restored during the examination must be submitted and clearly marked for identification. The **complete mouth series** of radiographs for the Periodontal Clinical Examination Section need not be submitted unless requested by an examiner. (If the testing site requires that radiographs be retained in the patient record, the candidate may submit duplicates of restorative or periodontal radiographs.) At sites where digital images are displayed on a monitor, an electric copy of the digital images used must be submitted on disk to NERB.
- Completed Progress Forms. The Fixed Prosthodontic and Endodontic Clinical Examination Progress Forms are submitted with the typodont to the CFE.
- Photo ID card for candidate and chairside assistant
- Patient Consent Form(s)
- Medical History Form(s)
- Color-coded cubicle ID cards (2)

The candidate will receive a receipt (Dental Candidate Check-Out Form) for all materials submitted at final check-out.

Check-Out Procedure for Retakes

Check-out for those retaking a single examination section is on the day the clinical examination is completed. Those taking examination sections on both days will check out the second day.

The ADEX Dental Examination Series

Curriculum Integrated Format

VI. Examination Forms

Examination Forms

Forms Completed Before the Examination

Medical History Form

This form is available in Appendix B of this Candidate Manual. The candidate must complete a Medical History Form for each patient participating in the examination. The Medical History Form may be completed prior to the examination and will be reviewed at patient check-in. If the patient will be treated by more than one candidate, each candidate must submit a separate Medical History Form.

The patient's blood pressure must be taken on the day of the examination and observed by a clinic floor examiner (CFE).

If the patient has a medical condition that could affect his/her suitability for treatment, the candidate must obtain a written medical clearance from the patient's physician to indicate that the patient is healthy enough to participate in the examination. The medical clearance must also be submitted on the day of the examination and should meet the following criteria:

- Clearly legible statement from a licensed physician
- Written within 30 days prior to the examination on official letterhead
- Containing a positive statement of how the patient should be medically managed
- Containing the physician's clearly legible name, address and phone number
- Containing a telephone number where the physician may be reached on the day of the examination if a question arises regarding the patient's health

Patient Consent Form (Patient Consent, Disclosure and Assumption of Liability)

This form is available in Appendix B of this Candidate Manual. Candidates must review the Patient Consent Form with their patients and submit a signed copy on the day of the examination.

Because this form will be reviewed by examiners during the procedure, candidates should initial – but not sign – the form before beginning treatment, in order to preserve anonymity. (Patients should sign with their full signature.) After the examination is completed and before submitting all records during check-out, candidates should complete the form with their full signature.

Periodontal Treatment Selection Worksheet

This form is available in Appendix B of this Candidate Manual. The Periodontal Treatment Selection Worksheet is a practice form candidates may use to identify the teeth they will treat during the Periodontal Clinical Examination Section. To earn a *Satisfactory* rating for patient selection on the Periodontal Examination Section, the candidate must identify a selection of teeth that meet these criteria:

- Six to eight teeth selected, each with at least one surface of calculus charted
- At least three posteriors (molars, premolars), including at least one molar, in the selection
- All posterior teeth must have at least one approximating tooth within 2 mm distance
- Exactly 12 surfaces of subgingival calculus charted, including at least three surfaces of interproximal calculus on molars/premolars
- At least eight of the surfaces on canines, premolars or molars (no more than four surfaces on incisors)

- Three pockets of 4 mm or greater in depth, each on a different tooth within the selection

Electronic Periodontal Evaluation Form

Electronic Evaluation Forms are used by examiners to score the candidate's performance. In most cases, candidates will not have access to these forms, with one exception: prior to the Periodontal Clinical Examination Section, candidates must enter their treatment selection into the Electronic Periodontal Evaluation Form to indicate to examiners which teeth are to be evaluated.

Typically, candidates use the Periodontal Treatment Selection Worksheet to identify and chart the selected teeth, and then transfer their responses from the Worksheet onto the Electronic Periodontal Evaluation Form.

To enter the treatment selection on the Electronic Periodontal Evaluation Form, candidates can log-in to their profile on the NERB website (www.nerb.org) and follow the online instructions. Access to the Electonic Periodontal Evaluation Form is closed beginning 48 hours prior to the **first exam day** at a given exam site, to allow uploading of the information prior to the examination. However, a computer will be available at the Coordinator's Desk to enter the periodontal treatment selection on the day of the examination. In order to reduce lost time on the day of the examination, NERB highly recommends completing this step prior to the day of the examination.

Forms Completed at the Examination

Once the examination begins, examination materials distributed by NERB may **not** be removed from the examining area. Forms may **not** be reviewed by unauthorized personnel.

Progress Forms

Color-coded Progress Forms are utilized to track the candidate's progress through each procedure, document anesthesia administered and treatment provided, collect examiner signatures for all completed portions of the examination and provide appropriate progress notes from the candidate to examiners during the course of treatment.

Candidates will be provided with identification labels to place on each procedure's Progress Form, as indicated on the form. On this label, candidates will enter their cubicle number, patient's name and assistant's name, if applicable.

The appropriate Progress Forms must be presented to the examiners at the time of patient check-in. Original, pre-operative radiographs must be mounted with transparent tape on the appropriate Progress Forms for the Restorative Clinical Examination Section.

The Fixed Prosthodontic and Endodontic Examination Section Progress Form will remain with the candidate throughout the examination. It must be filled out at the beginning of the examination and turned in as directed on the day of the examination.

Modification Request Form

Modification Request Forms are utilized to request permission to deviate from a *Satisfactory*-level restorative preparation. The form requires the candidate to provide the following information:

- **What** is the candidate requesting to do? (Type of modification)
- **Where**? (e.g., gingival axial line angle, mesial box)
- **How Much** is to be removed? (e.g., gingival axial line angle, mesial box)
- **Why** is the modification needed? (e.g., due to caries, decalcification)

Candidates who need to request a modification should place an identification label on the Modification Request Form and indicate their cubicle number, procedure, day and time.

Instruction to Candidate Form

Candidates may receive written instructions from examiners on an Instruction to Candidate Form if the examiners believe the treatment should be modified. The Instruction to Candidate Form is generated electronically by the examiners in the Evaluation Station, printed out at the Coordinator's Desk and delivered to the candidate by a clinic floor examiner, in order to preserve anonymity. The candidate must initial on the Instruction to Candidate Form that he/she understands the instructions.

Follow-Up Form

The Follow-Up Form is utilized to advise the patient and candidate of additional treatment needs or whenever the treatment started by the candidate is incomplete or the final treatment is unacceptable. Like the Instruction to Candidate Form, the Follow-Up Form is sent electronically to the Coordinator Desk for delivery to the candidate. The Follow-Up Form identifies the problem and establishes responsibility for further treatment. The patient is informed that follow-up care is necessary, financial responsibility is clarified and the candidate and chief examiner sign the form.

The ADEX Dental Examination Series

Curriculum Integrated Format

VII. Score Certification and Appeals

Score Certification and Appeals

Score Certification Procedure

Score Certification is a procedure whereby the documents from which the examination score was generated are re-checked for any irregularities or errors that may have occurred in establishing the score. Irregularities or errors in scoring include any evidence of incorrect entries on an Evaluation Form or a mathematical error. Score Certification is **not** a review of the examination process or candidate performance, and a listing of specific candidate errors is **not** included.

For information on how to submit a request for Score Certification go to www.nerb.org click on *Exam Info* and select *Appeals.*

Candidate Appeals Procedure

A candidate may appeal the results of his/her examination if he/she believes the results were adversely affected by extraordinary conditions during the examination that affected the final outcome of the candidate's examination. Appeals are reviewed on the basis of facts surrounding the decision during the examination. Appeals based on patient behavior, tardiness or failure to appear will not be considered. The appeals process is the final review authority, and if the appeal is denied there is no further review process within NERB.

All reviews of candidate appeals include the score certification procedure described above and are based on a reassessment of the documentation of the candidate's performance on the examination. The review is limited to a determination of whether there exists substantial evidence to support the judgment of the examiners at the time of the examination.

The review will not take into consideration other documentation that is not part of the examination process. Opinions of the candidate, auxiliaries, faculty members, patients, colleagues, examiners acting outside of the area of their assignment and records of academic achievement are not considered in determining the results of the examination and do not constitute a factual basis for an appeal. Consideration can only be given to documents, radiographs or other materials that were submitted during the examination and remain in the possession of NERB. Any other information such as radiographs, photographs or models of a patient taken after the completion of the examination will not be considered in the appeals process.

Any candidate who receives a failing score on an ADEX examination may, on his/her own behalf, submit a candidate appeal of that failing score.

For information on how to submit an appeal and on the appeal process itself, go to www.nerb.org, click on *Exam Info,* and then select *Appeals*.

APPENDIX A

Participating Licensing Jurisdictions

An up-to-date listing of state boards, addresses, phone numbers, email addresses and websites can be found on NERB's website at www.nerb.org, under the tab *Exam Info*, menu choice *States Accepting*.

CONNECTICUT

DISTRICT OF COLUMBIA

HAWAII

ILLINOIS

INDIANA

MAINE

MARYLAND

MASSACHUSETTS

MICHIGAN

NEVADA

NEW HAMPSHIRE

NEW JERSEY

OHIO

OREGON

PENNSYLVANIA

RHODE ISLAND

VERMONT

WEST VIRGINIA

WISCONSIN

Glossary of Words, Terms and Phrases

Abfraction — The deep V-shaped groove, usually noted at the CEJ, that is caused by bruxism. Abfraction may be visible or below the gingival margin.

Abrasion — Abnormal wearing of tooth substance or restoration by mechanical factors other than tooth contact.

Abutment — A tooth used to provide support or anchorage for a fixed or removable prosthesis.

Acrylic resin — Synthetic resin derived from acrylic acid used to manufacture dentures/denture teeth and provisional restorations.

Adjustment — Selective grinding of teeth or restorations to alter shape or contour and establish stable occlusion.

Angle — A corner.

- **Cavosurface angle**: An angle formed between the cavity wall and surface of the tooth.
- **Line angle:** The angle formed between two cavity walls or tooth surfaces.

Apical — The tip or apex of a root of a tooth and its immediate surroundings.

Attached gingiva — The portion of the gingiva that extends apically from the base of the sulcus to the mucogingival junction.

Attrition — Loss of tooth substance or restoration caused by mastication or tooth contact.

Axial wall — An internal cavity surface parallel to the long axis of the tooth.

Base — A replacement material for missing dentinal tooth structure, used for bulk build-up and/or for blocking out undercuts. Examples include ZOIB&T, IRM and zinc-phosphate cement.

Bevel — A plane sloping from the horizontal or vertical wall that creates a cavosurface angle greater than 90°.

Bonding agent — A component of a bonded resin restorative system, which is applied to an etched tooth surface and to which, after it is cured, the restorative material is applied and cured. A bonding agent may also be used to seal the surface of a cured composite resin restoration.

Bridge — A permanent restoration that replaces one or more missing natural teeth.

Build-up — A restoration associated with a cast restoration that replaces some, but not all, of the missing tooth structure coronal to the cementoenamel junction. The buildup provides resistance and retention form for the subsequent cast restoration. Also called Pin Amalgam Build Up (PABU) or Foundation.

Calculus — A hard deposit attached to the teeth, usually consisting of mineralized bacterial plaque.

Caries — An infectious microbiological disease that results in localized dissolution and destruction of the calcified tissues of the teeth. The diagnosis of dentinal caries is made by tactile sensation with light pressure on an explorer, described as 1) a defect with a soft, sticky base or 2) a defect that can be penetrated and exhibits definite resistance upon withdrawal of the explorer.

Cavity preparation	Removal and shaping of diseased or weakened tooth tissue to allow placement of a restoration.
Cavosurface margin	The line angle formed by the prepared cavity wall with the unprepared tooth surface. The margin is a continuous entity enclosing the entire external outline of the prepared cavity. Also called the cavosurface line angle.
Cementoenamel junction	Line formed by the junction of the enamel and cementum of a tooth.
Contact area	The area where two adjacent teeth approximate.
Convenience form	The shape or form of a cavity preparation that allows adequate observation, accessibility and ease of operation in preparing and restoring the cavity.
Convergence	The angle of opposing cavity walls that, when projected in a gingival to occlusal direction, would meet at a point some distance occlusal to the occlusal or incisal surface.
Core	A restoration, associated with a full coverage restoration, that replaces a major portion of the coronal tooth structure and is usually associated with a post of one type or another. The core provides resistance and retention form for the subsequent full coverage restoration.
Crown	Cast-metal restoration or porcelain restoration covering most of the surfaces of an anatomical crown.
Cusp, functional	Cusps of teeth that provide vertical stops that interdigitate with fossae or marginal ridges of an opposing tooth/teeth when the teeth are occluded.
Cusp, non-functional	Cusps of teeth, which by their present occlusion, **do not** provide a centric stop that interdigitates with a fossa or marginal ridge of an opposing tooth/teeth.
Debonded restoration	A restoration that exhibits immediate marginal leakage as a result of adhesive failure, which may include, but is not limited to, marginal discoloration, movement of the restoration or foreign substance between the restoration and tooth interface.
Debris	Scattered or fragmented remains of the cavity preparation procedure. All debris should be thoroughly removed from the preparation before the restoration is placed.
Defective restoration	Any dental restoration that is judged to be causing or is likely to cause damage to the remaining tooth structure if not modified or replaced.
Dentin	Calcified tissue surrounding the pulp and forming the bulk of the tooth.
Deposits, subgingival	Deposits that are apical to the gingival margin.
Deposits, supragingival	Deposits that are coronal to the gingival margin.
Divergence	The angle of opposing cavity walls that, when projected in an occlusal to gingival direction, would meet at a point some distance gingival to the crown of the tooth.
Embrasure	A “V” shaped space continuous with an interproximal space formed by the point of contact and the subsequent divergence of these contacting surfaces in an occlusal (incisal), gingival, facial or lingual direction.
Enameloplasty	The selective reshaping of the enamel surfaces of teeth to improve their form.

Erosion	Abnormal dissolution of toothmaterial by chemical substances. Typically, erosion involves exposed cementum at the CEJ.
Fissure	A developmental linear fault in the occlusal, buccal or lingual surface of a tooth, commonly the result of the imperfect fusion of adjoining enamel lobes.
Flash	Excess restorative material extruded from the cavity preparation extending onto the unprepared surface of the tooth.
Foundation	See *build-up*.
Gingival recession	The visible apical migration of the gingival margin, which exposes the CEJ and root surface.
Gingival wall	An internal cavity surface perpendicular to the long axis of the tooth near the apical or cervical end of the crown of the tooth or cavity preparation, which in a Class II preparation, is the floor of the proximal box.
Gingivitis	Inflammation of the gingiva.
Glass ionomer	Material containing polyacrylic acid and aluminosilicate glass that that can be used as restorative, lining or luting material.
Grainy	The rough, perhaps porous, poorly detailed surface of a material.
Ill-defined	A cavity preparation that, while demonstrating the fundamentals of proper design, lacks detail and refinement in that design.
Infra-occlusion	A tooth or restoration that lacks opposing tooth contact in centric when such contact should be present.
Interproximal contact	The area of contact between two adjacent teeth. Also called proximal contact.
Isthmus	A narrow connection between two areas or parts of a cavity preparation.
Keratinized gingiva	In healthy mouths, keratinized gingiva includes both the free marginal and attached gingiva, which are covered with a protective layer of keratin. It is the masticatory oral mucosa, which withstands the frictional stresses of mastication and toothbrushing and provides a solid base for the movable alveolar mucosa for the action of the cheeks, lips and tongue.
Line angle	The angle formed by the junction of two surfaces. In cavity preparations there can be internal and external line angles, which are formed at the junction of two cavity walls.
Line of draw	The path or direction of withdrawal or seating of a removable or cast restoration.
Liner	Resin or cement coating of minimal thickness (usually less than 0.5 mm) to achieve a physical barrier and/or therapeutic effect (a chemical effect that in some way benefits the health of the tooth pulp). Examples include Dycal, Life, Cavitec, Hydroxyline, Vitrebond and Fuji Lining LC.
Liner, treatment	An appropriate dental material placed in deep portions of a cavity preparation to produce desired effects on the pulp, such as insulation, sedation, stimulation of odontoblasts, bacterial reduction, etc. Also called therapeutic liner.
Long axis	An imaginary straight line passing through the center of the whole tooth occlusoapically.

Marginal deficiencies	Failure of the restorative material to meet the cut surface of the cavity preparation properly and completely; the marginal discrepancy does not exceed 0.5 mm, and the margin is sealed. Marginal deficiencies may include voids or under-contour.
Marginal excess	Restorative material that extends beyond the cavosurface margin of the cavity walls. Marginal excess may or may not extend onto the unprepared surface(s) of the tooth. See also: *over-contoured, flash, over-extension*.
Mobility	The degree of looseness of a tooth.
Occlusion	As used in this manual, occlusion refers to the closed bite relationship of the teeth in which the cusps are maximally interdigitated, i.e., "centric occlusion," also known as CO, maximal intercuspal position (MI/MIP), habitual occlusion or acquired occlusion).
Occlusoaxial line angle	In a casting preparation, the angle formed by the junction of the prepared occlusal and axial (lingual, facial, mesial, distal) surfaces.
Open margin	A cavity margin or section of margin at which the restorative material is not tightly adapted to the cavity preparation wall(s). Margins are generally determined to be open when they can be penetrated by the tine of a sharp dental explorer.
Outline form, external	The external boundary or perimeter of the finished cavity preparation.
Outline form, internal	The internal details and dimensions of the finished cavity preparation.
Over-contouring	Excessive shaping of the surface of a restoration so as to cause it to extend beyond the normal physiologic contours of the tooth when in health.
Over-extension of preparation	The placement of final cavity preparation walls beyond the position required to restore the tooth properly as determined by the factors that necessitated the treatment.
Over-extension of restoration	Restorative material that extends beyond the cavosurface margin of the cavity walls. Marginal excess may or may not extend onto the unprepared surface(s) of the tooth. See also *over-contoured, flash, marginal excess.*
Overhang, restoration	The projection of restorative material beyond the cavosurface margin of the cavity preparation but not extending onto the unprepared surface of the tooth. Also refers to the projection of a restoration outward from the nominal tooth surface. See also *flash.*
Path of insertion	The path or direction of withdrawal or seating of a removable or cast restoration. See also *line of draw.*
Periapical	Area around the root end of a tooth.
Periodontitis	Inflammation of the supporting tissues of the teeth. Usually a progressively destructive change leading to loss of bone and periodontal ligament. An extension of inflammation from gingiva into the adjacent bone and ligament.
Pits, surface	Small voids on the polished surface (but not at the margins) of a restoration.
Polishing, restoration	The act or procedure of imparting a smooth, lustrous and shiny character to the surface of the restoration.

Pontic	The suspended portion of a bridge that replaces the lost tooth or teeth.
Porous, restoration	Describes the surface of a restoration with minute orifices or openings that allow fluids or light to pass through.
Previous restorative material	Any preexisting restorative material present on a tooth, including pit and fissure sealants, liners, bases, composites, resin-based materials, alloys or cements.
Provisional restoration	Any restoration that, by intent, is placed for a limited period of time or until some event occurs. Any restorative material can be placed as a provisional restoration. The intent in placing the restoration and not the material determines the provisional status.
Pulp cap, direct	The technique of placing a liner (composed of an appropriate protective material) over the exposed pulp to promote reparative dentin formation and the formation of a dentinal bridge across the exposure. Usually a base is placed over the liner to provide structural support. The decision to perform a pulp cap or endodontics and the success of the procedure is determined by the conditions under which the pulp was exposed.
Pulp cap, indirect	The technique of deliberate incomplete caries removal in deep excavation to prevent frank pulp exposure, followed by basing of the area with an appropriate pulpal protection material to promote reparative dentin formation. The tooth may or may not be re-entered in six to eight weeks to remove the remaining dentinal caries.
Pulp exposure, carious	The frank exposure of the pulp through clinically carious dentin.
Pulp exposure, general	The exposure of the pulp chamber or former pulp chamber of a tooth with or without evidence of pulp hemorrhage.
Pulp exposure, irreparable	Generally, a pulp exposure in which most or all of the following conditions apply: • The exposure is greater than 0.5 mm. • The tooth had been symptomatic. • The hemorrhage is not easily controlled. • The exposure occurred in a contaminated field. • The exposure was relatively traumatic.
Pulp exposure, mechanical/ unwarranted	The frank exposure of the pulp through non-carious dentin caused by operator error, misjudgment, pulp chamber aberration, etc.

Pulp exposure, reparable

Generally, a pulp exposure in which most or all of the following conditions apply:

- The exposure is less than 0.5 mm.
- The tooth had been asymptomatic.
- The pulp hemorrhage is easily controlled.
- The exposure occurred in a clean, uncontaminated field.
- The exposure was relatively atraumatic.

Pulpal wall

An internal cavity surface perpendicular to the long axis of the tooth, which is the floor of the occlusal portion of the cavity preparation. Also referred to as the pulpal floor.

Pulpoaxial line angle

The line angle formed by the junction of the pulpal wall and axial wall of a prepared cavity.

Pulpotomy

The surgical amputation of the vital dental pulp coronal to the cementoenamel junction in an effort to retain the radicular pulp in a healthy, vital state.

Reduction of the crown, in endodontics

Reduction of the occlusal surface of a posterior tooth or lingual and/or incisal surfaces of an anterior tooth to take the tooth out of occlusion purposely.

Resistance form

The feature of a tooth preparation that resists dislodgment of a restoration in a vertical direction or along the path of placement.

Retention form

The feature of a tooth preparation that resists dislodgment of a crown in a vertical direction or along the path of placement.

Root planing

A definitive treatment procedure designed to remove cementum or surface dentin that is rough, impregnated with calculus or contaminated with toxins or microoganisms.

Scaling

Instrumentation of the crown and root surfaces of the teeth to remove plaque, calculus and stains from these surfaces.

Surface sealant, composite resin restoration coating

The application and curing of an unfilled resin to the surface of a composite restoration to fill porosities or voids or to provide a smooth surface after polishing the restoration.

Sealers

Cavity sealers provide a protective coating for freshly cut tooth structure of the prepared cavity.

- **Varnish:** A natural gum, such as copal rosin or a synthetic resin dissolved in an organic solvent, such as acetone, chloroform or ether. Examples include Copalite, Plastodent, Varnish, and Barrier.
- **Resin bonding agents:** Include the primers and adhesives of dentinal and all-purpose bonding agents. Examples include All-Bond 2, Scotchbond MP+, Optibond, ProBond, Amalgambond, etc.

Shade, restoration

The color of a restoration as defined by hue, value and chroma, which is selected to match as closely as possible the natural color of the tooth being restored.

Shoulder preparation

A shelf cut around the tooth as for a porcelain jacket crown.

Sound tooth structure	Enamel that has not been demineralized or eroded; it may include proximal decalcification that does not exceed one-half the thickness of the enamel and cannot be penetrated by an explorer. Previous restorative material or calcareous deposits do not qualify as sound tooth structure.
Stain, extrinsic	Stain that forms on and can become incorporated into the surface of a tooth after development and eruption. These stains can be caused by a number of developmental and environmental factors.
Stain, intrinsic	Stain that becomes incorporated into the internal surfaces of the developing tooth. These stains can be caused by a number of developmental and environmental factors.
Sonic scaler	An instrument tip attached to a transducer through which high frequency current causes sonic vibrations (approximately 6,000 cps). These vibrations, usually accompanied by the use of a stream of water, produce a turbulence, which in turn removes adherent deposits from the teeth.
Sterilization	A heat or chemical process to destroy microorganisms.
Supra-occlusion	A tooth or restoration that has excessive or singular opposing tooth contact in centric occlusion or in excursions from centric occlusion when such contact should not be present or should be balanced with the other contacts in the quadrant or arch.
Taper	To gradually become more narrow in one direction.
Temporary restoration	See *provisional restoration.*
Tissue trauma	Unwarranted iatrogenic damage to extra/intraoral tissues resulting in significant injury to the patient, such as lacerations greater than 3 mm, burns, amputated papillae or large tissue tags.
Ultrasonic scaler	An instrument tip attached to a transducer through which high frequency current causes ultrasonic vibrations (approximately 30,000 cps). These vibrations, usually accompanied by the use of a stream of water, produce a turbulence, which in turn removes adherent deposits from the teeth.
Uncoalesced	The failure of surfaces to fuse or blend together, such as the lobes of enamel, resulting in a tooth fissure.
Under-contouring	Excessive removal of the surface of a restoration so as to cause it to be reduced beyond the normal physiologic contours of the tooth when in health.
Undercut	Feature of tooth preparation that retains the intracoronal restorative material. An undesirable feature of tooth preparation for an extracoronal restoration.
Under-extension of preparation	Failure to place the final cavity preparation walls at the position required to restore the tooth properly, as determined by the factors that necessitated the treatment.
Under-extension of restoration	Restorative material that fails to extend to the cavosurface margin of the cavity walls thereby causing exposure of the prepared cavity wall.
Undermined enamel	During cavity preparation procedures, an enamel tooth surface (particularly enamel rods) that lacks dentinal support. Also called unsupported enamel.

Unsound marginal enamel	Loose or fragile cavosurface enamel that is usually discolored or demineralized, which can be removed easily with hand instruments when mild to moderate pressure is applied.
Varnish	See *sealers*.
Void(s)	An unfilled space within the **body** of a restoration or at the restoration margin, which may or may not be present at the external surface and therefore may or may not be visible to the naked eye.

APPENDIX B

Candidate Sequential:____
Candidate ID:
PLACE ID LABEL HERE
Test Site:____

Place barcode label above. If you do not have a barcode label, write in the corresponding numbers from your ID card on the lines above.

Medical History

□andidate Se□uential: ____

Cubicle #: ____

Patient's name_____ **Date Form Completed** _____/_____/_____

Birthdate _____/_____/_____ **Weight** _____

Blood Pressure _____ **Date/Time Taken** _____
Required – Must Be Taken Day of Examination

Examiner Confirms BP Taken Day of Exam | | | | | | |
Examiner Number

INSTRUCTIONS TO THE PATIENT:
Answer the following questions as completely and accurately as possible. All information is CONFIDENTIAL.
Please circle "yes" or "no" to all questions, and write in your answers as appropriate.

1. Are you under the care of a physician at this time?..... **YES NO**
   If yes, for what condition? _____
2. The name and address of my physician is:_____
3. My last physical examination was on_____
4. Has a physician treated you in the past six months?..... **YES NO**
   If yes, for what condition? _____
5. Have you been hospitalized or have a serious illness (including MRSA infection) within the last five years? ..... **YES NO**
   If yes, please specify:_____
6. Are you allergic or had any adverse reaction to any medicines, drugs, local anesthetics, LATEX or other substances? ... **YES NO**
   If yes, please specify:_____
7. Do you have or have you had any of the following diseases/problems? Please explain "YES" answers on the back.

A.	Abnormal bleeding, bruise easily or require blood transfusion……..……	**YES**	**NO**	**Q.**	Artificial/Prosthetic heart valves……..…	**YES**	**NO**
B.	Angina/Chest pain……..……..	**YES**	**NO**	**R.**	Valve damage following heart transplant....	**YES**	**NO**
C.	Asthma/Lung/Respiratory condition……	**YES**	**NO**	**S.**	Congenital heart disease……..	**YES**	**NO**
D.	Diabetes…….	**YES**	**NO**	**T.**	Infective endocarditis……...	**YES**	**NO**
E.	Emotional/Mental health disorder…..……...	**YES**	**NO**	**U.**	Heart murmur……...	**YES**	**NO**
F.	Epilepsy/Seizures/Convulsions…….	**YES**	**NO**	**V.**	Mitral valve prolapse……...	**YES**	**NO**
G.	Hepatitis/Jaundice/Cirrhosis, Liver disease..	**YES**	**NO**	**W.**	Rheumatic heart disease……...	**YES**	**NO**
H.	High blood pressure…….	**YES**	**NO**	**X.**	Congestive heart failure……...	**YES**	**NO**
I.	HIV positive/AIDS…….……..	**YES**	**NO**	**Y.**	Pacemaker ……...	**YES**	**NO**
J.	Hives or skin rash……..	**YES**	**NO**	**Z.**	Cardiovascular (heart) disease, Arteriosclerosis/Coronary occlusion……..	**YES**	**NO**
K.	Kidney/Renal disease……...	**YES**	**NO**				
L.	Sexually Transmitted Disease(s)…..……..	**YES**	**NO**	**AA.**	Cancer/Chemo/Radiation therapy……	**YES**	**NO**
M.	Stomach ulcers…….	**YES**	**NO**	**BB.**	Immune suppression or deficiency….....	**YES**	**NO**
N.	Thyroid disease…….	**YES**	**NO**	**CC.**	Heart attack Date:_____	**YES**	**NO**
O.	Tuberculosis…….…….	**YES**	**NO**	**DD.**	Heart surgery Date:_____	**YES**	**NO**
P.	Artificial/Prosthetic joint replacement……..	**YES**	**NO**	**EE.**	Stroke Date:_____	**YES**	**NO**

8. Have you had surgery or x-ray treatment for a tumor, growth or other condition of your head or neck? ..... **YES NO**
   If yes, please list: _____

Turn Over ➡

Please explain all "YES" answers to Question #7

9. Do you have any other diseases, conditions, or problems not listed above? If yes, please explain: ..... **YES NO**

_____

_____

_____

_____

Any item on the Medical History with a "YES" response, in questions #4-9 could require a Medical Clearance from a licensed physician if the explanation section indicated the possibility of a significant systemic condition that could affect the patient's suitability for elective dental treatment during the examination. The Medical Clearance must include the physician's name, address, and phone number.

10. Are you taking or have you ever taken any of the following medications for any type of cancer, osteoporosis or bone loss due to aging, Paget's Disease, or multiple myeloma? ..... **YES NO**
If yes, please check the appropriate medication below:

Non-Nitrogen Containing (less potent) Bisphosphonates - Oral

☐ Etidronate (Didronel®, Didrocal®)

☐ Tiludronate (Skelid®)

Nitrogen Containing Bisphosphonates – Oral

☐ Alendronate (Fosamax®, Fosamax+D, Fosavance®, Binosto®)

☐ Ibandronate (Boniva®, Bondronat®)

☐ Risedronate (Actonel®), Actonel Ca+D®

☐ Olpadronate

Nitrogen Containing Bisphosphonates – IV

☐ Pamidronate (Aredia®,Rhoxal®)

☐ Zoledronate (Zometa®, Aclasta®, Reclast®)

☐ Clodronate (Bonefos®)

☐ Neridronate

☐ Ibandronate (Boniva IV®)

(This list of Bisphosphonate medications should not be considered complete as new drugs are continually being developed)

11. Please list any **premedication, medications, pills, or drugs with dosage** which you are taking both prescription and nonprescription
(**Must be completed the DAY OF THE EXAMINATION**)

12. **WOMEN ONLY:** Are you pregnant? ..... **YES NO**
If yes, when is your expected due date? _____

I certify that I have read and understand the above. I acknowledge that I have answered these questions accurately and completely. I will not hold the testing agency responsible for any action taken or not taken because of errors I may have made when completing this form.

PATIENT SIGNATURE: _____ DATE SIGNED: _____

CANDIDATE INITIALS: _____ DATE INITIALED: _____ CANDIDATE SIGNATURE: _____

(Added at end of exam

Candidate Sequential:____
Candidate ID:____
PLACE ID LABEL HERE
Test Site:____

Patient Consent, Disclosure and Assumption of Responsibility

Candidate Sequential: | |
Cubicle# | |

I authorize the individual listed below (the "Candidate") to perform the following dental procedure(s) during the administration by the North East Regional Board of Dental Examiners, Inc. (the "NERB") of a dental licensing examination (the "Examination"):

- ☐ **Posterior Amalgam Prep and Restoration**
- ☐ **Anterior Composite Prep and Restoration**
- ☐ **Posterior Composite Prep and Restoration**
- ☐ **Periodontal Treatment**

Acknowledgment

I understand the following:

- that the Candidate may not be a licensed dentist.
- that the NERB has no knowledge of the Candidate's skill or competence, and makes no promises about them.
- that any arrangements between the Candidate and me regarding my serving as a patient (including any financial arrangements) are solely between the Candidate and me, and do not involve the NERB in any way.
- that the NERB has no duty to, and will not, notify me of inadequate work done by the Candidate during the Examination.
- that it is my responsibility to have any and all dental work performed by the Candidate checked by a licensed dentist to determine that it is satisfactory.

Disclosure of Risks

The Candidate has explained to me the risks involved in the procedures the Candidate will perform on me. The nature and purpose of the dental procedure(s), as well as the risks and possible complications, have been explained to me to my satisfaction by the Candidate. My questions with regard to the dental procedure(s) have been answered.

Adequacy of Treatment

I understand that the treatment provided during the Examination does not necessarily fulfill all my oral health needs, may not be performed correctly, or may not represent my entire treatment plan, and that further treatment may be necessary. I have been informed of the availability of services to complete treatment.

Authorization of Disclosure of Medical Information

I recognize that medical information which could be pertinent to the oral health care I receive in the course of the Examination may be communicated to the NERB, NERB examiners, the staff and clinicians of the dental school which is the location of the Examination, and other medical professionals when deemed medically necessary, or when necessary for the administration for the Examination. I authorize this disclosure. This authorization specifically includes the disclosure of radiographs (X-rays), and information about my current medical and dental condition and my prior medical and dental history.

Medical Condition and Medications

I have fully disclosed my current medical conditions and medical history to the best of my knowledge. I understand that if I am taking medications (especially those indicated on the Medical History in question 10) that are associated with certain chronic conditions, I may not be accepted as a patient for the Examination. I have fully disclosed all medications that I am currently taking. I have been informed that patients who are taking bisphosphonate medications may be at risk of osteonecrosis of the jaw after dental treatment or as a result of dental infections.

Consent to X-Rays and Photographs

I consent to the taking of appropriate radiographs (X-rays) and the examination of my teeth and gums. I also consent to having NERB examiners or the staff and clinicians of the dental school take photographs of my teeth and gums for use in future NERB examinations, provided that my name is not in any way associated with the photographs or X-rays.

Anesthesia

I understand that as part of the dental procedure(s), it may be necessary to administer local anesthetics and I consent to the use of such anesthetics by the Candidate.

Agreement

I release the NERB, participating dental schools, and their employees and/or agents from any and all responsibility or liability of any nature whatsoever for their acts, and any acts of the Candidate (including negligence), which occur during the course of this Examination, and any damages or injuries I may suffer as a result of my participation in the Examination.

I verify that I am not a dentist (licensed or unlicensed), a dental student in the 3rd, 4th, or final year of dental school, or a dental hygiene student in the final year of school.

By my signature below, I verify that I have read and fully understood the above information, and I agree to the terms of this agreement.

Patient's Name (Print): _____ Date: _____

Address: _____

Sex (Circle): M F Age: _____ Telephone #:_____ Email Address_____

Patient's Signature: _____

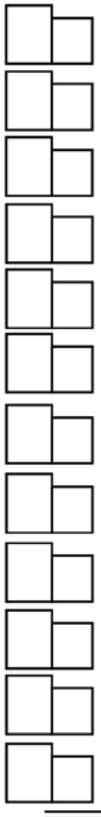
Candidate's Signature: _____

Periodontal Treatment Selection Worksheet

By the day of the examination all information on this Form must be accurately transferred electronicallly to the computer-based Periodontal Evaluation Form

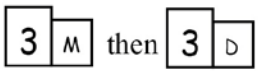
Do not submit this Form to the evaluation station, it is only for your use prior to and on the day of the examination and may be duplicated as needed

Tooth # & Calc. Location



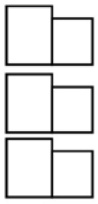
Subgingival Calculus Detection

In the large boxes to the left. Enter the number of the 6 to 8 teeth and indicate in the smaller adjacent box, the surface on that tooth where the calculus is located that you have selected for removal (M = Mesial, F= Facial, D = Distal, L = Lingual). Twelve surfaces must be indicated. If more than one surface is selected on the same tooth, enter tooth number each time a new surface is listed, example:



At least three of the selected teeth must be molars and/or premolars including one molar. All posterior teeth must have at least one approximating tooth within 2 mm distance. Record the tooth numbers in ascending order using the 1 to 32 system. Each tooth selected must have at least one surface of calculus indicated for removal. No more than 4 surfaces may be selected on incisors. **At least 3 surfaces must be on interproximal surfaces of molars and/or premolars.**

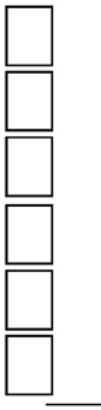
Tooth #/ Surface



Pocket Depth Qualification

Enter the numbers of 3 separate teeth (from the list of teeth below selected for Subgingival Calculus Detection) with 4 mm or deeper pockets in the large boxes to the left and indicate the surface where the pocket selected on each tooth is located in the smaller adjacent box (M = Mesial, F= Facial, D = Distal, L = Lingual). It is not necessary to select one of these surfaces to scale.

Tooth #



Plaque/Stain Removal

Enter the numbers of the first 6 separate teeth (from the list of teeth above selected for Subgingival Calculus Detection). These teeth will be evaluated for the removal of plaque, stain, and supragingival calculus on the crowns of the teeth.

The two teeth assigned for "Pocket Measurements" will be indicated on the Periodontal Progress Form. Your pocket measurements should also be recorded on the Periodontal Progress Form.

Each time the patient is sent to the Evaluation Station, the Periodontal Progress Form, Medical History, Informed Consent and radiographs must accompany the patient.

The assigning examiner will insert Start and Finish times on the Periodontal Progress Form and return it to you. The assigning examiner will also give permission to administer the anesthetic solution.

It is the candidate's responsibility to accurately transfer the information from this Treatment Selection Worksheet to the electronic Evaluation Form prior to presenting the patient for assignment.

INFORMATION TO BE SUPPLIED TO ALL PATIENTS WHO SIT FOR THE EXAMINATION IN DENTISTRY CONDUCTED BY THE NORTH EAST REGIONAL BOARD OF DENTAL EXAMINERS

You are sitting as a patient for a qualifying examination for licensure in dentistry. This is a most important day for the dentist who is a candidate for licensure in the states, which participate in this examination, administered by the North East Regional Board of Dental Examiners. Everything you can do to cooperate with him/her is greatly appreciated. Your promptness and understanding are most important. A successful result of this examination for your dentist means he/she will be able to enter practice and render a valuable service of oral health care to many people.

As a patient of this licensure candidate, any continuing care which you may require as a result of the procedures performed on this examination is the responsibility of the candidate who performed the service for you. Please be sure that your name, address and telephone number are supplied to the candidate and are recorded on the Progress Form provided by the North East Regional Board of Dental Examiners. Conversely, be sure you receive the same information concerning your dentist.

Qualified examiners are always present during this examination to evaluate the performance of the candidate. The examiners are unbiased and professional. Their behavior should not seem to be unfriendly, but to ensure fairness, they are instructed to not fraternize with patients or candidate at any time. Patients, candidates and auxiliary personnel will be treated with respect and understanding according to the rules of the examination.

Thank you for your cooperation.

APPENDIX C

Checklist

- ☐ Read the entire Candidate Manual for the ADEX Dental Examination Series.

REGISTRATION

- ☐ Complete the online registration by following the instructions in Section IV (Registration Procedures) of this manual.

PROMETRIC TESTING CENTERS

- ☐ Select the Prometric Testing Center where you will take the Diagnostic Skills Examination Section. After your registration has been processed and NERB has sent you an authorization letter, schedule your appointment with Prometric by phone or online.

- ☐ Take two forms of personal identification to the Prometric Testing Center: one with a recent photo, and **both** with your signature. Acceptable forms of ID include: valid current driver's license, passport and military ID. A credit card is acceptable as a secondary form of ID. An out-of-date driver's license is not considered valid ID for this purpose. If your name has **recently** changed due to marriage, divorce or other legal reasons, bring a copy of the marriage certificate or court document to the Prometric Center.

TAKE TO THE CLINICAL EXAMINATION SITE AND TO THE ORIENTATION THE DAY BEFORE

- ☐ Two forms of identification, both with your signature and one with a recent photograph. Acceptable forms of ID include: valid current driver's license, passport, military ID and employee ID. A credit card is acceptable as a secondary form of ID. An out-of-date driver's license is not considered a valid ID for this purpose.

- ☐ Assigned testing site, time and sequential number, available for printing from your NERB online profile under the *Apply* tab.\

- ☐ A ballpoint pen to be used on the Progress Forms **only**

- ☐ Two #2 lead pencils

- ☐ All necessary materials and instruments

- ☐ ADEX Candidate Manual

SCHOOL/SITE FEES

- ☐ Pay the school facility use fee or equipment rental fee (if required) to the school.

PATIENTS

- ☐ Complete appropriate NERB forms for each patient.

- ☐ Ensure that the patient meets the ADEX requirements as published in this Candidate Manual.

- ☐ Bring all necessary radiographs to the testing site.

- ☐ Review all the criteria that are to be evaluated in the clinical sections of the examination series.

- ☐ Inform the patient that this exercise is not a complete oral care treatment.

- ☐ Ensure that a back-up patient(s) is/are available if needed.

Certification of Status as a Graduate Student of Record

If you are a graduate student, faculty member, etc. you need to have this form signed by the Dean or other designated official at the school you are currently attending/serving granting you permission to take the CIF examination at that school. Once signed, scan it and submit it with your online application, instructions will be provided online. You also MUST submit a scanned copy of your diploma online in the appropriate area.

Student's Name: _____
Last Name First Name Middle Name

Student's SS#: | | | | - | | | - | | | | |

School: _____

This letter certifies that the candidate listed above is a graduate student, faculty member, etc. of record and is granted permission to take the CIF examination at our examination site.

_____
Signature of Dean or designated school official

_____
Date