



# Orthodontic Assisting (OA)

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## Exam Outline and References

The OA exam is a component of the Certified Orthodontic Assistant (COA®) certification program and tests knowledge-based competence.

The purpose of the OA exam is to ensure that individuals meet the minimum national standard for knowledge-based competence in orthodontic assisting tasks critical to the health and safety of patients and dental healthcare personnel.

### COA exams

#### Orthodontic Assisting (OA)

Infection Control (ICE®)

Effective 07/01/2022

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# OA Exam

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## Exam Weighting by Domain

- I. Evaluation (21%)
- II. Radiation Health and Safety (18%)
- III. Orthodontic Procedures (35%)
- IV. Patient Education and Office Management (26%)

## Exam Administration

Number of Multiple-Choice Questions	140
Time for Exam (minutes)	105
Time for Appointment (minutes)	110

### Testing Options

This exam is administered in-person and through remote online proctoring. The candidate may choose the method they prefer. Remote proctoring allows candidates to take exams using their own computer while being remotely monitored by webcam and microphone.

### How DANB exams are administered

DANB uses computer adaptive testing (CAT). Exams are scored based on the level of difficulty of the questions answered correctly. This method can more accurately pinpoint a candidate's ability level. Each candidate is presented with the same percentage of questions from each domain. The average candidate will answer around 50% of the questions correctly.

# OA Exam Outline

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## I: Evaluation (21%)

- A. Preliminary examination
  - 1. Patient's general physical condition
  - 2. Head, neck and oral cavity, including but not limited to:
    - a. tooth morphology.
    - b. tooth functions.
    - c. tooth surfaces.
    - d. tooth anatomy.
    - e. tooth angles and divisions.
    - f. occlusion and malocclusion.
  - 3. Health/dental history
  - 4. Orthodontic conditions, including but not limited to:
    - a. facial symmetry.
    - b. oral abnormalities or speech difficulties.
- B. Chart conditions of the oral cavity
- C. Treatment documentation
  - 1. Treatment and prescriptions
  - 2. Patient consent
  - 3. Patient compliance
- D. Diagnostic data, including but not limited to:
  - 1. intra- and extraoral photographs.
  - 2. landmarks, points and relationships on cephalometric images.
  - 3. temporomandibular joint images and landmarks.
  - 4. Impressions.
  - 5. bite registrations.
  - 6. diagnostic casts, including trimming, finishing and mounting models on an articulator.

## II: Radiation Health and Safety (18%)

- A. Purpose of radiographic images
  - 1. Panoramic
  - 2. Cephalometric
  - 3. Cone beam computed tomography (CBCT)
- B. Surveys to examine or view specific conditions, teeth or landmarks

- C. Techniques, including error correction
- D. Purpose and maintenance of equipment
- E. Patient management techniques
- F. Features of a diagnostically acceptable image
- G. prepare images for legal requirements, viewing, duplication and transfer
- H. Radiation safety
  - 1. X-radiation
    - a. Sources
    - b. Factors affecting x-ray production (e.g., kVp, mA, exposure time)
    - c. Characteristics
    - d. Factors that affect radiation safety
    - e. Physics
      - i. Primary
      - ii. Secondary
    - f. Protocol for suspected x-ray machine malfunctions.
  - 2. X-radiation safety
    - a. Causes of unnecessary exposure to x-radiation
    - b. X-radiation biology
      - i. Short- and long-term effects on cells and tissues
      - ii. X-radiation doses and effective dose
    - c. Limit exposure to x-radiation (ALARA)

### III: Orthodontic Procedures (35%)

- A. Orthodontic techniques, including, including but not limited to:
  - 1. Prepare treatment room
  - 2. Prepare treatment trays
  - 3. Seat and prepare the patient, position the dental team and adjust equipment
  - 4. routine adjustments.
  - 5. Placement and removal of elastics
  - 6. appliance delivery.
  - 7. fitting and adapting intra- and extraoral appliances.
  - 8. orthodontic emergencies.
  - 9. Polish teeth before placement of bands/brackets
  - 10. brackets and band cementing
  - 11. fabricate, place, remove, debride, polish and repair fixed and removable appliances.
  - 12. separator placement and removal.
  - 13. maintain field of operation.

14. topical anesthetic administration.
15. supragingival cement removal after bonding or banding.
16. Tooth preparation for fixed and removable appliances.
17. pre- and post-surgical treatment.
18. arch wire formation, placement, ligation and removal

B. Operative materials

1. cements.
2. etchants
3. bonding agents.
4. impression materials.
5. Laboratory materials
  - a. Acrylics
  - b. Gypsum

C. Prevent and respond to medical conditions that can cause emergencies

1. Neurological disorders (e.g., syncope, hyperventilation, seizures, stroke)
2. Respiratory disorders (e.g., asthma, COPD)
3. Cardiovascular disease (e.g., myocardial infarction, acute myocardial infarction, hypertension)
4. Endocrine conditions (e.g., diabetes mellitus, hypoglycemia)
5. Allergic reactions
6. Soft tissue inflammations
7. Traumatic injuries

## IV: Patient Management and Administration (26%)

A. Patient management, including but not limited to:

1. anxiety.
2. behavior management (e.g., pediatric, special needs).

B. Oral health education, including but not limited to:

1. nutrition.
2. systemic and periodontal diseases.
3. benefits and risks of fluoride.
4. oral healthcare habits.
5. plaque control (e.g., disclosing, brushing, flossing, irrigation aids).
6. care and wearing of fixed and removable orthodontic appliances.

### C. Administration

1. Legal record maintenance, including but not limited to:
  - a. lending records to another dental office.
  - b. patient data and records.
  - c. patient communication and dental and medical consultations.
2. Legal responsibilities and regulations
  - a. Legal protocols
  - b. Dentist-patient relationship
  - c. Informed consent
  - d. Health Insurance Portability and Accountability Act (HIPAA) regulations
  - e. Standard of care

### D. Inventory management

1. Order supplies, instruments and equipment
2. Store supplies
3. Reorder supplies

# OA Exam Suggested References

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DANB exam committees use the following textbooks and reference materials to develop this exam. This list does not include all available study materials; these are the resources that exam committees have determined provide the most up-to-date information needed to meet a determined level of competence on this exam. It is not an endorsement of the publications. Any one reference will likely not include all the study material required to pass the exam. **Please note that previous editions of the resources below may be used for study purposes if the previous version was published within the past 7 years, unless noted otherwise.**

## Suggested Exam Preparation References

1. Bird, Doni L. and Debbie S. Robinson. *Modern Dental Assisting*. 13th ed. Saunders, 2020.
2. Johnson, Orlen N. and Evelyn M. Thomson. *Essentials of Dental Radiography for Dental Assistants and Hygienists*. 10th ed. Pearson, 2018.
3. Phinney, Donna J. and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 6th ed. Cengage, 2022.

## Additional/Optional Study Resources

1. The DALE Foundation. [www.dalefoundation.org](http://www.dalefoundation.org).
  - *DANB OA Practice Test*
  - *DANB RHS Review*
  - *DANB RHS Practice Test*

## Acronyms

The following table lists acronyms that you may find on this exam. When you take the exam, the full list of acronyms will be available to you.

Abbreviation	What it stands for
HIPAA	Health Insurance Portability and Accountability Act
HIV	human immunodeficiency virus
OSHA	Occupational Safety and Health Administration
TMJ	temporomandibular joint
mm	millimeter
°F	degrees Celsius
kVp	kilovoltage peak
PID	position indicating device
CEJ	cementoenamel junction
mA	milliamperage
NiTi	nickel-titanium
OHCP	oral healthcare personnel
rads	radiation absorbed dose

# Exam Development and Maintenance

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## How exams are developed

DANB exams are developed using this exam outline, which is annually reviewed by subject matter experts. The outline is developed using a content validation study, which includes a job analysis survey where practicing DANB certificants and certificate holders are asked how often tasks are performed and how critical competent performance of tasks is to the health and safety of the public and oral healthcare worker. This study is conducted every five to seven years to ensure the outline is consistent with current clinical practices. DANB's Board of Directors approves all updates to DANB exam outlines.

## How the passing standard is determined

The exam passing standard is evaluated and a Standard Setting Study is conducted the year following a Content Validation Study. DANB uses a modified Angoff standard setting method and convenes a panel of subject matter experts to evaluate and make judgements about the difficulty of the exam items and the criticality of the content of the exam items. Modified Angoff standard setting methods are commonly used to set the passing standards for certification exams.

## How exams are scored

In a criterion-referenced examination, a candidate must obtain a score equal to, or higher than, the passing score to pass the test. A minimum passing scaled score of 400 must be obtained to pass the exam with scores ranging from 100 to 900 points. Exam results are reported as a "scaled score" which is neither a "number correct" nor a "percent correct" score. Performance on the exam is not compared to the performance of others taking the exam.

## Receiving your Pass or Fail status

Candidates will receive a preliminary Pass or Fail status at the test center, or a link to the results if taken through remote online proctoring, upon completion of the examination. A preliminary report may not be used for regulatory or employment decisions. Official exam results will be provided by DANB within one to three weeks.

## State Regulations

Each state's dental board implements regulations and establishes rules for delegating legally allowable duties to dental assistants. Passing one or more of the DANB component exams or earning DANB certification only conveys authority to perform these duties in those states that recognize these exams or this certification as meeting state dental assisting requirements. This information is available at [www.danb.org](http://www.danb.org).