

Information Statement for the 2004 Examination as at Monday, 15 March, 2004 Dental Technicians Board

Examination for Overseas Qualified Dental Technicians for Registration as a Dental Technician in New Zealand

Venue:

Room 3.03.
School of Dentistry,
Great King Street,
Dunedin.

Format of the Examinations

The examination will have 3 parts.

1. A three-hour written examination.
2. A three and a half day practical examination.
3. A 15-minute viva voce examination.

1. Three hour written examination;

This examination will examine the following areas of Dental Technology.

- Dental laboratory techniques and protocols.
- Laboratory cross infection control.
- Dental materials and metallurgy.

All questions of each section must be answered.

The use of an English language dictionary and a dictionary for translation is permitted in this examination, but electronic dictionaries, dental dictionaries and foreign language dental dictionaries are not permitted. Candidates should bring their own dictionary, which will be examined by the invigilator. The questions must be answered in the language of New Zealand, which is English.

2. The technical examination. Duration 3 1/2 days.

This examination will have five components;

1. Complete Dentures
 - 1.1. Make a set of mandibular and maxillary wax bite blocks / occlusal rims on the casts marked number 1.
 - 1.2. Using the rims, record the occlusal vertical dimension (OVD), mid-line and lip-line from one of the three master articulators marked Master A, B, or C. Mark on your maxillary cast the letter of the master articulator you used to record the OVD.
 - 1.3. Using your bite blocks, mount the casts marked number 1 on the semi-adjustable articulator supplied, using the "Bonwill Triangle" as the guide to positioning the casts.
 - 1.4. Set the occlusal determinants of the articulator to;
 - 1.4.1. Condylar inclination - 25 degrees.
 - 1.4.2. Bennett angle - 12 degrees.
 - 1.4.3. Incisal guidance angle - 25 degrees.
 - 1.4.4. Canine guidance angle - 20 degrees.
 - 1.5. Set and wax up complete full upper and lower dentures to a bi-lateral balanced occlusion ready for a try-in. (The teeth may be ground.)

Criteria used for evaluation;

- Reproduction of OVD, mid-line and lip-line from master articulator.
- Production of bi-lateral balanced occlusion based on the given articulator angles. [The candidate will have to manipulate the compensating curves in combination with selective grinding of the teeth to produce this occlusal concept within the angles set on the articulator.]
- Aesthetics of anterior tooth arrangement.
- Aesthetics of wax contouring / festooning.
- Clinically acceptable.
- Presentation.

2. Partial denture

2.1. On the casts marked number 2, manufacture a mandibular acrylic partial denture using the following steps and incorporating the following components;

2.2. Survey, block out and duplicate the master cast in dental stone using the reversible hydrocolloid supplied. (Indicate on the side of the master cast the depth of undercut used for each clasp. DO NOT REMOVE THE BLOCKOUT - LEAVE IT ON THE CAST UNDER THE FINAL FITTED DENTURE.)

2.3. On the duplicated cast, and using the teeth provided, set up the denture to the following prescription;

2.3.1. Mesial wrought half round wire rests on 35, 47.

2.3.2. Distal wrought half round wire rest on 45.

2.3.3. Wrought 1mm round stainless steel Akers clasp on 45, engaging mesiobuccal undercut,

2.3.4. Wrought 1mm round stainless steel Akers clasp on the 35,

2.3.5. Wrought 1mm round stainless steel ring clasp on 47, engaging mesiolingual undercut.

2.4. The partial denture is opposed by a complete maxillary denture.

2.5. Process the denture in heat cured acrylic.

2.6. Finish the denture and present on the master cast with the original block out intact.

Criteria used for evaluation;

- Accuracy of wrought wirework. Retention and function of clasps and rests.
- Aesthetics of tooth arrangement.
- Aesthetics of contouring / festooning.
- Thickness / function and finish of denture retaining base / major connectors.
- Fit.
- Clinically acceptable.
- Presentation.

3. Removable orthodontic appliance

3.1. On the cast marked number 3, construct a removable orthodontic appliance using wire and self-curing acrylic incorporating the following components;

3.2. Adams clasps on the 16 and 26. (0,7mm wire)

3.3. Close fitting / contoured labial bow from distal 13 to 23 with open loops.

3.4. Palatal finger springs (with guide wire against the palate and waxed out and roofed over with acrylic) to move the 15 and 25 distally. (0,5mm wire)

3.5. Retaining base in self-cure acrylic.

Criteria used for evaluation;

- Adams clasps - follows the design as per "Adams" with arrowheads placed into mesial and distal buccal undercuts at 45° angles. Tags contoured through the bite to minimise occlusal interferences.
- Finger springs allow for adequate range of action, and contact the teeth to be moved at the tangent to direction of movement. Springs designed so patient can engage the activated spring and insert appliance into the mouth. Guide wire placed to allow full range of movement of the spring.
- Labial bow contoured to closely fit the teeth. U-loops, size adequate to allow for adjustment, do not touch the gingival tissue, tags contoured through bite to minimise occlusal interferences.
- Retaining base, thickness, finish, contour around teeth. Trimmed to allow springs to accomplish tooth movement. Boxing of springs to allow full range of action. Tags of wire elements enveloped and retained.
- Clinically acceptable.
- Presentation.

4. Fixed bridgework

- 4.1. Mount casts marked number 4 in the semi-adjustable articulator using the intercuspal position.
- 4.2. Wax up a 3 unit metal-ceramic substructure incorporating the following components;
- 4.3. 14 - metal-ceramic retainer with lingual metal collar and cut-back for buccal porcelain shoulder,
- 4.4. 15 - metal-ceramic pontic for full porcelain coverage, modified ridge lap design,
- 4.5. 16 - metal-ceramic retainer with 360 degree metal collar.

Criteria used for evaluation;

- Provision of adequate space for porcelain.
- Designed for adequate support of the porcelain and maximise strength of the bridge.
- Dimensions of the connectors.
- Designed to minimise stresses in the porcelain.
- Pontic design.
- Presentation.

5. All-metal Crown

- 5.1. Mount casts marked number 5 in the semi-adjustable articulator using the intercuspal position.
- 5.2. Wax-up, sprue, invest and cast (using the flame melting method and centrifugal casting machine) an all-metal crown on the 26 in the "student alloy" provided.
- 5.3. Fit and finish the crown ready for insertion.

Criteria used for evaluation;

- Tooth shape.
- Occlusal morphology.
- Fit, marginal seal, proximal contacts, bite - prematurity free in centric and eccentric movements.
- Finish.
- Clinically acceptable.
- Presentation.

All components of the technical examination must be attempted. Candidates must bring with them their own preferred tools, instruments, burs and protective clothing. Micro-motors are provided.

3. Viva voce examination. Duration 15 minutes.

The candidate will be required to talk about and evaluate the work they have done in the written and practical examination. The conversation will be in the language of New Zealand.

Examination dates

From Monday to Friday (inclusive) - June 28 to July 2, 2004.

Candidates are requested to assemble in Room 3.03 at 8:45 am on the Monday for a short introduction to the examination.

The 3 hour written examination will commence at 9:30 am on the Monday.

The practical examination will commence at 2:00 pm on the same day, Monday and will conclude at 5:00 pm on the Thursday. The laboratory will be open from 08h30 to 13h00 and 14h00 to 17h00.

The viva voce examinations will be held on the morning of Friday commencing at 09:00 am and continue into the afternoon depending on numbers. Detailed times will be issued to candidates once the names and numbers of candidates are known.

Pass level.

To be considered for registration a candidate is required to pass all parts of the examination.

1. The written examination must be passed with a minimum overall pass mark of 50%.
2. The practical examination. All components of the practical examination must be complete and of satisfactory quality.
3. The viva voce examination must be completed satisfactorily.

Re-examination.

A candidate who fails the examination will, at the discretion of the New Zealand Dental Technicians Board, be permitted to take the examination again in the following year. In general, parts or components of the current examination may not be carried forward to the next examination, however a candidate who fails the written and viva voce examination, but performs well in all components of the practical examination, may be permitted by the New Zealand Dental Technicians Board, on the recommendation of the examiners, to re-sit only the written and viva voce examination, at the next available examination.

Notification of results.

Results will be posted to the secretary of the Dental Technicians Board the following week. The Dental Technicians Board will inform the candidate of their results.

Examiners for 2004

M.r J.N. Waddell. Senior Teaching Fellow, Course Co-ordinator - BDentTech, Faculty of Dentistry

Mr. K. M. Lyons. Specialist Prosthodontist, Department of Oral Rehabilitation, Faculty of Dentistry

Dr. A. G. T. Payne. Specialist Prosthodontist, Department of Oral Rehabilitation, Faculty of Dentistry

Preparation

Candidates should be conversant and skilled in the use of all dental materials, techniques and methods used in dental laboratories in New Zealand. A candidate must have a good knowledge of current methods of laboratory cross-infection control.

As a guide to study for the examination, the following textbooks are recommended;

- Adams, C. P., 1970, The Design and Construction of Removable Orthodontic Appliances, 4th ed., John Wright & Sons Ltd., Bristol. ISBN 0-7236-0262-X
- Anusavice, K.J., 1996, Phillip's Science of Dental Materials, 10th Ed., W.B. Saunders Co., Philadelphia, ISBN 0-7216-5741-9
- Yamamoto, M., 1985, Metal-Ceramics, Quintessence Pub., Co., Chicago. ISBN 0-86715151-X
- Zarb, G.A., Bolender, C.L., and Carlsson, G.E., 1997, Boucher's Prosthodontic Treatment of Edentulous Patients, 11th Edition, Mosby, London.
- McGivney, G.P., and Carr, A.B., 2000, McCracken's Removable Partial Prosthodontics, 10th Edition, Mosby, London.

Candidates for whom English is a second language should prepare for this examination by practising reading and writing in English. In particular they must become familiar with the terms and phrases used by dental technicians to describe the methods and materials used in dental technology.

Photocopies of the written examinations from 1995-2003 may be purchased from Mr Murray Wells, Secretary, Dental Technicians Board, C/- P O Box 11053, Ellerslie, AUCKLAND

Equipment and materials

A candidate may choose to bring their own English dictionary and an English/foreign language dictionary for translation to the written examination. No other documents or books are permitted. Dental Dictionaries and Electronic devices are not permitted.

EACH CANDIDATE MUST BRING THEIR OWN TOOLS, INCLUDING ORTHODONTIC PLIERS AND CUTTERS, PLASTER BOWLS AND SPATULA, INSTRUMENTS, BURS FOR TRIMMING, FINISHING AND POLISHING OF ACRYLIC AND METAL, AND PROTECTIVE CLOTHING. CANDIDATES WILL NOT BE PERMITTED TO BORROW FROM OTHER CANDIDATES. THE SCHOOL OF DENTISTRY DOES NOT KEEP STOCK OF THESE ITEMS. ["Hanau" Flasks and Clamps are provided].

All materials necessary to complete the tasks for the practical examination are provided.

Equipment provided for the practical examination.

- Semi-adjustable articulator
- Bench motors/ hand pieces
- Hanau flasks and clamps
- Polishing facilities for acrylic resin
- Ney Dental Surveyor
- Appropriate models will be provided

Accommodation and travel

Candidates should arrange their own accommodation and travel to ensure that they arrive in time for the examination and are present for the duration of the examination. There is a variety of accommodation available close to the School of Dentistry in Dunedin. However you should book your accommodation as early as possible.