

UNIVERSITY OF BOLTON
FACULTY OF HEALTH AND WELLBEING
BSc (HONS) DENTAL TECHNOLOGY
SEMESTER TWO EXAMINATION 2023/2024
DENTAL TECHNOLOGY TECHNIQUES FOR
ORTHODONTICS
MODULE NO: DNT5105

Date: Tuesday 14 May 2024

Time: 2.00 pm – 4.00 pm

INSTRUCTIONS TO CANDIDATES:

There are 13 questions on this examination paper.

Answer ALL questions on this examination paper.

There are a total of 100 marks available.

The pass mark is 40%

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Answer ALL questions on this examination paper

- 1) True or false? A fixed orthodontic appliance is indicated for bodily tooth movement.

1 mark

- 2) a) With the aid of a labelled diagram describe what is occurring within the supporting structures of a tooth when an orthodontic tipping force is applied. Your diagram should include where the force is applied and the point around which the tooth will move.

(17 marks)

- b) From the movement stated in 2a) provide two active components that can achieve tipping.

(2 marks)

Total 19 marks

- 3) a) What do you understand by the term anchorage?

(3 marks)

- b) How it can be achieved?

(6 marks)

Total 9 marks

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- 4) An Adams clasp is not used to resist vertical displacement of a removable orthodontic appliance.

True or false?

1 mark

- 5) a) During the retention phase following active orthodontic treatment the clinician is not satisfied with the position of the upper right lateral incisor as it is slightly out of alignment with the arch. How could the Hawley retainer prescribed for the patient be adapted and modified in order to correct this slight malocclusion? Your answer should include the step-by-step process involved and where necessary wire size used.

(14 marks)

- b) List the advantages of modifying a removable orthodontic appliance and give examples for each point.

(9 marks)

Total 23 marks

- 6) List 5 of the advantages of intra-oral scanning in the production of orthodontic models?

5 marks

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7) a) Why is it essential when soldering components together on an orthodontic appliance that there is a minimum gap between them of 0.15 to 0.2 mm?

(2 marks)

b) What are 6 of the main principles to consider when soldering?

(6 marks)

Total 8 marks

8) Flux will inhibit the flow of solder. Yes or no?

1 mark

9) How does a posterior bite plane help facilitate the correction of an anterior cross bite?

4 marks

10) Name and describe a technician made fixed appliance that would prevent the unwanted anterior drifting of the first upper permanent molars where there are missing pre-molars.

7 marks

11) A patient who has an allergy to acrylic needs a retention appliance following their active orthodontic treatment. This situation makes a Hawley retainer unsuitable. What alternative removable retainer could be prescribed? Your answer should include the advantages and disadvantages of this appliance over the Hawley retainer.

13 marks

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12) The retention phase of a patients' orthodontic treatment plan is essential to ensure a successful outcome. Why is this phase so important?

6 marks

13) Orthodontic components can be divided into either being active, passive or fixative. Give one example of each.

3 marks

TOTAL MARKS - 100

END OF QUESTIONS