



CHAPTER 1

Restorative Dentistry

Single Best Answer Questions for Dentistry, First Edition. Prateek Biyani.
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1. What is the ideal freeway space (FWS) for complete dentures?
 - (a) 1–3 mm
 - (b) 2–4 mm
 - (c) 3–5 mm
 - (d) 4–6 mm
 - (e) 5–7 mm

2. Which of the following describes a Kennedy Class II, in Kennedy's classification for partially dentate patients?
 - (a) Patient with bilateral free-end saddles
 - (b) Patient with a unilateral free-end saddle
 - (c) Patient with a unilateral bounded saddle
 - (d) Patient with an anterior bounded saddle
 - (e) Patient with a bilateral free-end saddle and a missing UR2

3. What is the primary purpose of indirect retention in partial denture design?
 - (a) Prevent displacement of the denture in the axial direction
 - (b) Aid insertion and removal of the denture
 - (c) Prevent lateral forces on teeth
 - (d) Prevent tipping/rotation of the denture about a fulcrum
 - (e) Allow for effective cleaning

4. A sclerosed canal can be more easily navigated using which of the following irrigants?
 - (a) Chlorhexidine
 - (b) Sodium hypochlorite
 - (c) Ethylenediaminetetraacetic acid (EDTA)
 - (d) Water
 - (e) Calcium hydroxide

5. Which graph best describes the changes in plaque pH in response to food?
 - (a) The Miller Curve
 - (b) The Monson Curve
 - (c) The Stephan Curve
 - (d) The David Curve
 - (e) The Spee Curve

1. b

This is the ideal FWS. However, often, if patients have had a different FWS for a long period of time, it may be necessary to adhere to their existing FWS. This is primarily to ensure good habituation.

2. b

Kennedy Class II is a unilateral free-end saddle. It may also have modifications. It is only Kennedy Class IV that does not have any modifications, as the most posterior saddle dictates the class and, thus, any modifications would in fact fall in to a different class.

3. d

Indirect retention helps prevent tipping of the denture about a fulcrum created by the denture components. It can be provided by other denture components including clasps, rests and connectors.

4. c

EDTA is a chelating agent used to soften the dentine and allow easy exploration of sclerosed canals. Sodium hypochlorite is the typical irrigant for root canal treatments. Calcium hydroxide is better used in a pulpless, temporary dressing.

5. c

The curve demonstrating plaque pH changes associated with snacking is the Stephan Curve. This helps demonstrate how frequent snacking causes the pH to drop below the critical pH more frequently. As a result, an individual is more likely to develop caries.

6. Which of the following is the advancing edge of a carious lesion in enamel?
- (a) Dark zone
 - (b) Body of the lesion
 - (c) Surface zone
 - (d) Translucent zone
 - (e) Zone of sclerosis
7. Which of the following is a crucial feature of amalgam cavity design?
- (a) 110° cavo-surface angle
 - (b) Presence of unsupported enamel
 - (c) Leaving caries at the amelo-dentinal junction (ADJ)
 - (d) Placement of pins
 - (e) Undercuts
8. Which of the following best describes retruded contact position (RCP)?
- (a) The position of the mandible, relative to the maxilla, when the teeth are maximally intercusped
 - (b) The first tooth contact when the condyle lies in its most favourable position in the glenoid fossa
 - (c) The position of the mandible when the condyle lies in its most favourable position in the glenoid fossa
 - (d) The movement of the mandible during protrusive movements
 - (e) The movement of the mandible during lateral movements
9. Which of the following is not a feature of the ideal occlusion?
- (a) Mutual protection
 - (b) Molar guidance
 - (c) Anterior guidance
 - (d) RCP = ICP
 - (e) Forces down the long axis of the teeth
10. A patient presents with pain brought on by hot/cold stimuli that settles shortly after the stimulus is removed. What is the likely diagnosis?
- (a) Reversible pulpitis
 - (b) Acute irreversible pulpitis
 - (c) Chronic irreversible pulpitis
 - (d) Periapical abscess
 - (e) Cracked tooth syndrome

6. d

The translucent zone marks the advancing edge of a carious lesion in enamel. This is then followed by the dark zone, the body of the lesion and finally the surface zone.

7. e

Undercuts are necessary for amalgam restorations as they rely on mechanical retention. A 90° cavo-surface angle is needed to reduce the risk of fracture, due to thin amalgam sections, and caries should always be cleared from the ADJ.

8. b

RCP is the position where first tooth contact occurs with the mandible in centric relation, i.e. where the mandibular condyle lies in the most superior (comfortable) position in the glenoid fossa.

9. b

An ideal occlusion should feature canine guidance, and not molar guidance, for lateral excursions. This protects the posterior teeth.

10. a

This is a classic symptom of reversible pulpitis – pain settling once the stimulus is removed. The causative factor, for example a leaking restoration, needs to be corrected for symptoms to settle.

11. Which of the following is not a method of determining working length?
- (a) Apex locator
 - (b) Paper points
 - (c) Preoperative radiograph
 - (d) Working length radiograph
 - (e) Step-back technique
12. Which of the following irrigants helps remove the smear layer during root canal treatment?
- (a) Sodium hypochlorite
 - (b) Water
 - (c) Chlorhexidine
 - (d) EDTA
 - (e) Saline
13. Which of the following is not a contraindication for surgical endodontics?
- (a) Persistent disease where non-surgical treatments have failed
 - (b) Poor surgical access
 - (c) Unrestorable tooth
 - (d) Underlying bleeding disorders
 - (e) Non-surgical treatments are feasible
14. Which of the following is unlikely to cause insecurity of a complete denture?
- (a) Overextension in the buccal sulcus
 - (b) Lack of denture extension
 - (c) Balanced occlusion and articulation
 - (d) Extension over the hamular notch
 - (e) Thin post-dam
15. Which of the following is a contraindication for veneers?
- (a) Diastema closure
 - (b) Fluorosis
 - (c) Camouflaging a canine as a lateral incisor
 - (d) Pulpless teeth
 - (e) Good oral hygiene

11. e

Step-back technique is a method of root canal preparation and not a method of determining working length.

12. d

EDTA helps remove the smear layer which allows irrigants in to the dentinal tubules. This allows more thorough chemo-mechanical preparation.

13. a

Persistent disease, where standard treatment has failed, is the general reason for carrying out surgical endodontics. All the other options are common contraindications.

14. c

Balanced occlusion and articulation are the desired occlusal schemes with dentures and lead to best stability. All the other options are likely to lead to a lack of retention in some form.

15. d

Pulpless teeth will generally continue to discolour over time and so the aesthetic value of a veneer will be lost. Careful consideration must be given to these teeth.

- 16.** Which of the following would be an indication for crown placement?
- (a) More conservative options available
 - (b) Subgingival caries
 - (c) Grade 2 mobility
 - (d) Heavily restored tooth
 - (e) Root fracture
- 17.** What is the ideal degree of taper for preparation of an indirect restoration?
- (a) 1–3°
 - (b) 3–5°
 - (c) 5–7°
 - (d) 7–9°
 - (e) >9°
- 18.** Erosion means loss of tooth surface tissue due to:
- (a) Chemical processes independent of bacteria
 - (b) Chemical processes associated with bacteria
 - (c) Tooth-to-tooth contact
 - (d) Damage from foreign bodies
 - (e) Occlusal forces
- 19.** Which of the following is an indication for the use of rubber dam?
- (a) Latex allergy
 - (b) Claustrophobia
 - (c) Difficult access
 - (d) Airway protection
 - (e) Improving impression detail
- 20.** What is the usual shoulder preparation for a metal-ceramic crown?
- (a) 0.5 mm
 - (b) 1.0 mm
 - (c) 1.3 mm
 - (d) 1.8 mm
 - (e) 2.0 mm

16. d

A heavily restored tooth, without any recurrent caries, would be an ideal candidate for a crown. If there is a more conservative management option then this should be attempted first. Extensive caries and periodontal disease are strict contraindications.

17. c

A taper of 5–7° is ideal to allow for optimal retention.

18. a

Erosion occurs due to chemical processes independent of bacteria. Attrition is due to tooth-to-tooth contact and abrasion is due to foreign bodies (very commonly toothbrushing trauma).

19. d

Airway protection is critical in root canal preparation. Other indications include moisture isolation and improved visibility.

20. c

A general shoulder preparation of between 1.2–1.5 mm should be done to ensure adequate thickness and space for metal and porcelain.

21. Which of the following is not a principle of crown preparation?
- (a) Undercut preparation
 - (b) Conservative preparation
 - (c) Retention form
 - (d) Resistance form
 - (e) Marginal integrity
22. What is the optimum crown-root ratio for crown preparation?
- (a) 1 : 1
 - (b) 1 : 2
 - (c) 2 : 3
 - (d) 2 : 1
 - (e) 3 : 2
23. Which of the following is not used as a temporary following indirect restoration preparation?
- (a) Amalgam
 - (b) Direct composite
 - (c) Stainless steel crown
 - (d) Polycarbonate shell crown
 - (e) Aluminium shell crown
24. What is the shortened dental arch (SDA)?
- (a) 4–5 pairs of occluding teeth
 - (b) 6–7 pairs of occluding teeth
 - (c) 7–8 pairs of occluding teeth
 - (d) 9–10 pairs of occluding teeth
 - (e) 11–12 pairs of occluding teeth
25. What is bracing in relation to partial dentures?
- (a) Resistance to lateral and anterior displacing forces
 - (b) Resistance to axial displacing forces
 - (c) Resistance to tipping of denture
 - (d) Resistance to displacement of denture in to the ridge
 - (e) Ability to connect denture components

21. a

Undercuts should be avoided for conventional crown preparations to ensure proper seating and retention.

22. c

Ideally there should be a ratio of 2:3 in order to have a more predictable outcome. However, 1:1 may be accepted but caution is advised.

23. a

Amalgam is never used as a temporary following indirect preparation, as it cannot be constructed in the appropriate shape.

24. d

The SDA typically refers to 9–10 pairs of occluding teeth, allowing adequate function for a patient. This may inform treatment planning for missing teeth.

25. a

Bracing prevents the denture from being displaced laterally and anteriorly. It can be provided by major connectors, clasps and reciprocating plates.

26. Which of the following is not an advantage of an overdenture compared to a complete denture?
- (a) Improved proprioception
 - (b) Better aesthetics
 - (c) Increased support from roots
 - (d) Preservation of bone
 - (e) Increased retention via precision attachments
27. What is the minimum thickness needed for incisal and occlusal rest seats?
- (a) 0.2 mm
 - (b) 0.5 mm
 - (c) 0.7 mm
 - (d) 1.0 mm
 - (e) 1.5 mm
28. Which bur can be used to widen endodontic access cavities without damaging the floor?
- (a) Rosehead
 - (b) Gates-Glidden
 - (c) Microfine diamond
 - (d) Endo-Z
 - (e) Tungsten carbide
29. What is the fluoride content of fluoride varnish?
- (a) 1200 ppm
 - (b) 2200 ppm
 - (c) 5600 ppm
 - (d) 10 200 ppm
 - (e) 22 600 ppm
30. What is the NICE recall interval for high caries risk patients?
- (a) 1 month
 - (b) 3 months
 - (c) 12 months
 - (d) 24 months
 - (e) 36 months

26. b

There is not an aesthetic advantage of an overdenture over a complete denture.

27. b

A minimum of 0.5 mm is required to provide sufficient thickness of the rest, otherwise fracture is likely. This may require rest seats to be cut in the relevant teeth or assessment for sufficient occlusal space without preparation.

28. d

Endo-Z burs have a non-cutting tip which allows for access preparation without risk of perforating the floor.

29. e

Fluoride varnish can be applied up to four times a year on high-risk patients and contains 22 600 ppm of fluoride.

30. b

A three-month recall should be put in place for high caries risk patients until they are stabilised.

31. Which of the following is not a property of mineral trioxide aggregate (MTA)?
- (a) Non-toxic
 - (b) Non-resorbable
 - (c) Short setting time
 - (d) Biocompatible
 - (e) Minimal marginal leakage
32. Which of the following describes the obturation technique of warm vertical condensation?
- (a) Obturation with a single master gutta percha (GP) cone with sealer
 - (b) Obturation with a master cone and GP accessory points, using an ultrasonic unit to warm the GP
 - (c) Obturation using a reverse H-file to push GP down the canal
 - (d) Obturation with a plastic carrier coated in GP
 - (e) Obturation with a downpack/apical plug and then backfilling incrementally with melted GP
33. What is the average length of a maxillary canine?
- (a) 20.5 mm
 - (b) 21.6 mm
 - (c) 24.7 mm
 - (d) 28.3 mm
 - (e) 26.5 mm
34. What is the suggested concentration for chlorhexidine as a root canal irrigant?
- (a) 0.001 %
 - (b) 0.1–1 %
 - (c) 0.2–2 %
 - (d) 2–3 %
 - (e) 3.5–5 %

31. c

MTA has a long setting time, which is one of its main disadvantages. Biodentine is an alternative material that aims to improve on this property primarily through the addition of calcium chloride.

32. e

Warm vertical condensation involves placing an apical plug for apical control and then backfilling from this. Option **a** describes single cone technique; **b** describes warm lateral condensation; **c** describes thermomechanical compaction; and **d** describes carrier-based systems.

33. e

The average length of a maxillary canine is 26.5 mm with, typically, a single root and single root canal. Mandibular canines are usually slightly shorter at 25.6 mm.

34. c

Chlorhexidine should be used at a concentration of 0.2–2%. Chlorhexidine 2% has the same antibacterial activity as 5.25% sodium hypochlorite, with residual effects lasting for up to 48 hours.

