

Chapter 01: Introduction to Restorative Dental Materials

Powers: Dental Materials, 11th Edition

MULTIPLE CHOICE

1. What causes caries?
 - a. Food debris
 - b. Materia alba
 - c. Acidic foodstuff
 - d. Bacterial plaque
 - e. Salivary glycoproteins

ANS: D

	Feedback
A	Food debris does not have the structural organization of bacterial plaque biofilm.
B	Materia alba does not have the structural organization of bacterial plaque biofilm.
C	Acidic foodstuff lowers pH and may demineralize teeth but does not directly cause decay.
D	Caries is caused by biofilm; also known as bacterial plaque.
E	Salivary glycoproteins form the acquired enamel pellicle to which bacteria adhere.

DIF: Knowledge REF: p. 1 OBJ: 2

TOP: CDA, GC, V, A,1b. Patient Education and Oral Health Management

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and Manipulation of Materials

2. Caries is most likely to occur on which of the following tooth surfaces?
 - a. Buccal
 - b. Lingual
 - c. Occlusal
 - d. Interproximal
 - e. C and D are both correct.

ANS: E

	Feedback
A	Buccal surfaces are also susceptible to caries; however, there is less surface area left unchecked.
B	Lingual surfaces are also susceptible to caries; however, there is less surface area left unchecked.
C	Caries is most likely to occur in pits and fissures on the occlusal surface and on interproximal tooth surfaces where plaque accumulates unchecked.
D	Caries is most likely to occur in pits and fissures on the occlusal surface and on interproximal tooth surfaces where plaque accumulates unchecked.

E	Caries is most likely to occur in pits and fissures on the occlusal surface and on interproximal tooth surfaces where plaque accumulates unchecked.
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DIF: Knowledge REF: p. 1 OBJ: 2
TOP: CDA, GC, III, B, 1, Describe how to prepare, mix, deliver, and store restorative materials, including but not limited to a. amalgam, c. composites
MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

3. Which of the following is an intracoronal restoration?
- Ceramic–alloy crown on tooth number 21
 - Ceramic veneer on tooth number 8
 - Ceramic onlay on tooth number 30
 - Ceramic inlay on tooth number 14

ANS: D

Feedback	
A	The alternate choices are all extracoronal restorations used to repair the external.
B	The alternate choices are all extracoronal restorations used to repair the external.
C	The alternate choices are all extracoronal restorations used to repair the external.
D	A ceramic inlay on tooth number 14 is an example of an intracoronal restoration, meaning that the restoration is being used to repair damage restricted to the internal parts of a tooth. Materials such as amalgam and composite resin are used in addition to ceramic or cast metal.

DIF: Knowledge REF: p. 4 OBJ: 3
TOP: CDA, GC, III, B, 1, Describe how to prepare, mix, deliver, and store restorative materials, including but not limited to a. amalgam, c. composites
MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

4. What is the process called where decay is removed from the tooth in order for a restoration to be placed?
- Cavity preparation
 - Convenience form
 - Margination
 - Extension

ANS: A

Feedback	
A	The process is referred to as <i>cavity preparation</i> . Cavity preparation is used to remove diseased or damaged tissue and provide a space accessible for restoration and one that can stably retain the restoration.
B	<i>Convenience form</i> is a term describing the nature of the cavity preparation.
C	<i>Extension</i> is a term describing the nature of the cavity preparation.
D	Margination is the procedure for finishing the margins of a restoration.

DIF: Knowledge REF: p. 4 OBJ: 2

TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

5. Which of the following is an example of an intracoronal (direct) restoration?
- Laboratory-cured composite
 - Dental amalgam
 - Ceramic veneer
 - Cast crown

ANS: B

	Feedback
A	Laboratory-cured composite is a restoration that is constructed away from the patient in the dental laboratory.
B	Dental amalgam is an example of a direct restoration. All of the other restorations are prepared away from the tooth and then cemented or bonded to the tooth using a procedure that is independent of the manufacturer of the restoration.
C	Ceramic veneer is a restoration that is constructed away from the patient in the dental laboratory.
D	Cast crown is a restoration that is constructed away from the patient in the dental laboratory.

DIF: Knowledge REF: p. 4 OBJ: 3

TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

6. Which of the following is an example of an extracoronal restoration? Choose all that apply.
- Ceramic inlay
 - Ceramic–alloy crown
 - Porcelain jacket crown
 - A, B, and C
 - A and C

ANS: D

	Feedback
A	All three restorations involve lab procedures and are examples of indirect restorations.
B	All three restorations involve lab procedures and are examples of indirect restorations.
C	All three restorations involve lab procedures and are examples of indirect restorations.
D	All three restorations involve lab procedures and are examples of indirect restorations.
E	All three restorations involve lab procedures and are examples of indirect restorations.

DIF: Knowledge REF: p. 5 OBJ: 3
 TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

7. Which of the following is an example of an extracoronal restoration?
- Disto-occlusal ceramic inlay on tooth number 29
 - Buccal Cl. V composite resin on tooth number 31
 - Mesio-occlusal gold onlay on tooth number 15
 - Mesio-occlusal amalgam on tooth number 13

ANS: C

	Feedback
A	This is an example of intracoronal restoration because it fits within the internal borders of the anatomical crown.
B	This is an example of intracoronal restoration because it fits within the internal borders of the anatomical crown.
C	An onlay involves an inlay with extension to cover or protect a cusp. Thus a mesio-occlusal gold onlay on tooth number 15 is an example of an extracoronal restoration.
D	This is an example of intracoronal restoration because it fits within the internal borders of the anatomical crown.

DIF: Knowledge REF: p. 5 OBJ: 3
 TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

8. Which material is used to fill the root canal once all of the pulpal tissue has been removed?
- Silver point
 - Paper points
 - Dental cement
 - Moisture-resistant sealer

ANS: D

	Feedback
A	Silver master points are no longer used to fill canals.
B	Paper points are used to dry the canal after irrigation.
C	Dental cements may be used to seal the access opening but are not suited to fill the canals.
D	The space created when the pulpal tissues are removed must be replaced with sealers that prevent ingress of bacteria that comes with moisture.

DIF: Knowledge REF: p. 5 OBJ: 4
 TOP: CDA, GC, II. B.2. h. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to h. endodontic therapy
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

9. A(n) _____ is also known as a bridge.
- removable partial denture
 - fixed partial denture
 - abutment
 - pontic

ANS: B

Feedback	
A	A removable partial denture may be removed by the patient and is not known as a bridge.
B	A fixed (cemented) partial denture is commonly known as a bridge. The crown preparation portions of the bridge are called abutments, and the missing tooth replacement is called the pontic.
C	An abutment is an individual component of a fixed partial denture and is not known as a bridge.
D	A pontic is an individual component of a fixed partial denture and is not known as a bridge.

DIF: Knowledge REF: p. 9 OBJ: 5
 TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

10. A resin-bonded fixed partial denture is sometimes used under which conditions?
- Bridge has only one abutment.
 - Abutment teeth have been endodontically treated.
 - Abutment teeth are healthy and free of major restorations.
 - The bridge has a long span involving more than four teeth.

ANS: C

Feedback	
A	Placement of crowns on the abutment teeth requires substantial sacrifice of tooth structure regardless of the condition of the abutment tooth.
B	Endodontically treated teeth become brittle over time once the blood supply has been removed. The teeth need additional reinforcement.
C	A resin-bonded fixed partial denture may be used when the abutment teeth are healthy and free of major restorations. Case selection is critical, because retention problems may occur with this type of restoration.
D	Long span bridges require a significant amount of retention. A resin-bonded fixed partial, bridge.

DIF: Knowledge REF: p. 10 OBJ: 5
 TOP: CDA, GC, II. B.2. h. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge preparation/cementation
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

11. The _____ of a fixed partial denture fills the edentulous space.
- pontic
 - obturator
 - abutment
 - connector

ANS: A

	Feedback
A	The artificial replacement tooth used to fill the edentulous space of a fixed bridge is called a <i>pontic</i> .
B	An obturator is used to fill tissue defects due to an accident or disease.
C	The crowned teeth are called <i>abutments</i> .
D	A connector joins crowns to pontics.

DIF: Comprehension

REF: p. 9

OBJ: 5

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge preparation/cementation

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

12. Dental implants are commonly fabricated from _____-based metal alloys.
- dental amalgam
 - titanium
 - gold
 - iron

ANS: B

	Feedback
A	Dental amalgam is used to fill intracoronal restorations.
B	Dental implants are commonly fabricated from titanium alloys. The surface of the implant may be titanium oxide or may be treated with other materials.
C	Gold is used to fabricate extracoronal restorations.
D	Iron is not a metal used in the oral environment.

DIF: Knowledge REF: p. 11 OBJ: 5

TOP: CDA, GC, II. B.2. m. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to m. implants MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

13. Which of the following types of implants are placed into but not through bone?
- Subperiosteal
 - Transosseous
 - Endosseous
 - Mucosal

ANS: C

	Feedback
A	A subperiosteal implant is placed between the bone and the overlying soft tissue.
B	A transosseous (staple) implant is placed through bone (e.g., the mandible).
C	An endosseous implant is placed into but not through bone. It is usually a single tooth form.
D	A mucosal implant is placed between the bone and overlying soft tissue.

DIF: Knowledge REF: p. 11 OBJ: 5

TOP: CDA, GC, II. B.2. m. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to m. implants MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

14. Which of the following is an advantage of endosseous implant placement when contrasted with fixed bridgework? Endosseous implants
- leave adjacent teeth unrestored.
 - do not require invasive surgery.
 - are less costly than fixed partial dentures.
 - require floss threaders to clean abutment teeth.

ANS: A

	Feedback
A	Endosseous implants leave adjacent teeth unrestored.
B	Endosseous implants require a surgical procedure.
C	Endosseous implants are relatively costly.
D	Fixed partial dentures require floss threaders to clean abutment teeth.

DIF: Knowledge REF: p. 11 OBJ: 5

TOP: CDA, GC, II. B.2. m. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to m. implants MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

15. Which type of crown is placed on an implant?
- Direct intracoronal
 - Direct extracoronal
 - Indirect intracoronal
 - Indirect extracoronal

ANS: D

	Feedback
A	A direct intracoronal restoration is fabricated in the mouth.
B	Direct extracoronal restorations for implants do not exist.
C	An indirect intracoronal restoration is surrounded by tooth structure.
D	An indirect extracoronal crown is placed on an implant.

DIF: Knowledge REF: p. 10 OBJ: 5

TOP: CDA, GC, II. B.2. m. Select and describe how to prepare tray setups and all necessary

armamentaria for chairside dentistry and dental emergency procedures, including but not limited to
m. implants MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

16. When would removable partial dentures be indicated?
- a. Replacement of single missing teeth
 - b. Replacement of multiple missing teeth in multiple locations
 - c. Situations where there is a distal abutment tooth to anchor a fixed bridge
 - d. A and C
 - e. B and C

ANS: B

	Feedback
A	Fixed partial dentures or single tooth implants are appropriate for replacement of single missing teeth.
B	Removable partial dentures are appropriate for replacement of multiple missing teeth in multiple locations.
C	Removable partial dentures are appropriate for situations in which there is not a distal abutment tooth to anchor a fixed partial denture.
D	A and C are incorrect answers.
E	C is an incorrect answer, but B is a correct answer.

DIF: Comprehension REF: p. 12 OBJ: 5
TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

17. The abutment teeth of a removable partial denture are engaged by what method?
- a. Ceramic–alloy crowns
 - b. All-ceramic crowns
 - c. Pontics
 - d. Clasps

ANS: D

	Feedback
A	Abutment teeth of a removable partial denture may be restored with crowns.
B	Abutment teeth of a removable partial denture may be restored with crowns.
C	Pontics are artificial teeth used with fixed partial dentures to restore edentulous spaces.
D	Abutment teeth of a removable partial denture are engaged by clasps.

DIF: Knowledge REF: p. 12 OBJ: 5
TOP: CDA, GC, II. B.2. V. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to V. removable partials or full dentures
MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

18. Which of the following statements is true of removable partial dentures?

- a. Removable partial dentures use a framework made of acrylic.
- b. The partial denture framework rests on tissue.
- c. The partial denture framework rests on specific abutment teeth.
- d. The partial denture framework rests on specific pontic teeth.

ANS: C

Feedback	
A	The framework is made of metal.
B	The acrylic portion of a removable partial denture rests on tissue.
C	The framework of a removable partial denture rests on specific abutment teeth.
D	Pontic teeth are associated with fixed rather than removable partial dentures.

DIF: Knowledge REF: p. 12 OBJ: 5

TOP: CDA, GC, II. B.2. v. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to v. removable partials and full dentures

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

19. What types of teeth are bonded to the framework of removable partial dentures?
- a. Resin composite
 - b. Ceramic
 - c. Acrylic
 - d. Alloy

ANS: B

Feedback	
A	Ceramic teeth are not used for removable partial dentures.
B	Acrylic teeth are bonded to the framework of removable partial dentures.
C	Resin composite is used as an esthetic restorative material.
D	Teeth cast in alloy are not used for removable partial dentures.

DIF: Knowledge REF: p. 12 OBJ: 5

TOP: CDA, GC, II. B.2. v. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to v. removable partials or full dentures

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

20. Which of the following is an advantage of removable partial dentures over fixed partial dentures?
- a. Removable partial dentures are more esthetic.
 - b. Removable partial dentures are more comfortable.
 - c. With removable partial dentures, it is easier to clean and inspect the remaining teeth.
 - d. Teeth adjacent to the edentulous space can be used to anchor dentures.

ANS: C

Feedback	
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A	Fixed partial dentures (fixed bridgework) are more esthetic and more comfortable.
B	Fixed partial dentures (fixed bridgework) are more esthetic and more comfortable.
C	It is easier to clean and inspect the remaining teeth with removable partial dentures.
D	This is a technique used with fixed partial dentures, not removable partial dentures.

DIF: Knowledge REF: p. 12 OBJ: 5

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to v. removable partial or full dentures

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

21. Which type of restoration is recommended for an edentulous patient?
- Complete denture
 - Fixed partial denture
 - Removable partial denture
 - Acid-etched resin-bonded bridge

ANS: A

Feedback	
A	A complete denture is appropriate for an edentulous patient. The complete denture may be fixed to tissue or to dental implants for retention.
B	A three-unit fixed partial denture is a fixed restoration that is anchored to stable teeth in the same arch.
C	A removable partial denture is a fixed restoration that is anchored to stable teeth in the same arch.
D	An acid-etched resin-bonded bridge is a fixed restoration that is anchored to stable teeth in the same arch.

DIF: Knowledge REF: p. 12 OBJ: 5

TOP: CDA, GC, II. B.2. v. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to v. removable partials or full dentures

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

22. The phrase *fixed bridge* is a common term to describe which type of restoration?
- Complete denture
 - Fixed partial denture
 - Single tooth implant
 - Removable partial denture

ANS: B

Feedback	
A	A complete denture is a removable denture.

B	<i>Fixed bridge is analogous to fixed partial denture.</i>
C	A single tooth implant is not an example of a multiunit restoration.
D	A removable partial denture is a removable denture.

DIF: Knowledge REF: p. 12 OBJ: 5

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

23. Fluoride gels, rinses, and varnishes are highly effective at treating which dental condition?
- Caries
 - Drifting
 - Staining
 - Gingival recession

ANS: A

Feedback	
A	Fluoride gels, rinses, and varnishes are highly effective at preventing caries.
B	Treating periodontitis and restoring edentulous spaces prevent drifting of teeth.
C	Some forms of fluoride will stain teeth.
D	Using the correct toothbrushing technique and avoiding periodontitis prevent gingival recession.

DIF: Knowledge REF: p. 12 OBJ: 6

TOP: CDA, GC, II. B.2. j. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to j. fluoride application MSC: NBDHE, 5.0 Using Preventive Agents, 5.1.2 Toxicology

24. Acid etching is used to bond pit and fissure sealant material to which tooth tissue?
- Enamel
 - Dentin
 - Cementum
 - Dental pulp

ANS: A

Feedback	
A	Pit and fissure sealants are bonded to enamel that is typically etched with phosphoric acid before bonding.
B	Dentin must be restored with a heavier weight material such as composite resin.
C	Cementum must be restored with a heavier weight material such as composite resin.
D	Dental pulp exposure must be treated endodontically.

DIF: Knowledge REF: p. 12 OBJ: 6

TOP: CDA, GC, III.D.2. e. Describe how to prepare, mix, deliver, and store restorative materials, including but not limited to e. pit and fissure sealants

MSC: NBDHE, 5.0 Using Preventive Agents, 5.2.2 Techniques for application

25. What is the purpose of mouth protectors?
- Trauma
 - Temporomandibular arthritis
 - Orthodontic crowding of teeth
 - Insufficient vertical dimension

ANS: A

	Feedback
A	Mouth protectors are used to prevent trauma to the oral structures during sports.
B	Temporomandibular arthritis is a disease process.
C	Orthodontic treatment is performed to relieve crowding.
D	Insufficient vertical dimension is corrected using a partial or complete denture.

DIF: Knowledge REF: p. 12 OBJ: 6
 TOP: CDA, GC. IV. B. 3. Laboratory materials and procedures
 MSC: NBDHE, 5.0 Using Preventive Agents, 5.3 Other preventive agents

26. Which tooth surface is most susceptible to caries in older adults?
- Pits and fissures of the occlusal surface
 - Cervical smooth surface of all teeth
 - Exposed root surfaces of all teeth
 - Interproximal areas of all teeth

ANS: C

	Feedback
A	Pits and fissures of the occlusal surface are typically more vulnerable at the time of eruption.
B	Cervical smooth surfaces of all teeth are susceptible at any age based on oral hygiene habits.
C	While all tooth surfaces can be susceptible to caries, exposed cementum is more vulnerable than enamel for caries formation due to its softer composition.
D	Interproximal areas of all teeth are susceptible at any age based on oral hygiene habits.

DIF: Knowledge REF: p. 1 OBJ: 2
 TOP: CDA, GC, V. A.1b. Patient Education and Oral Health Management
 MSC: NBDHE, 3.0 Planning and Managing Dental Hygiene Care, 3.3.2.1 Dental Caries

27. Which areas of the teeth are most susceptible to caries?
- Interproximal
 - Occlusal
 - Lingual
 - All of the above are correct.
 - Only A and B are correct.

ANS: E

	Feedback
A	Interproximal area of the teeth is difficult to keep clean, thus resulting in a higher incidence of caries forming.
B	Occlusal surfaces are susceptible to caries because of poorly coalesced pits and fissures.
C	Lingual surface is smooth and easier to keep clean.
D	Not all options listed are correct.
E	Only A and B are correct.

DIF: Knowledge REF: p. 1 OBJ: 2
TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
MSC: NBDHE, 3.0 Planning and Managing Dental Hygiene Care, 3.3.2.1 Dental Caries

28. Which of the following tissues is most likely to be affected by periodontal disease caused by bacterial plaque?
- Periodontal ligament
 - Enamel
 - Dentin
 - Pulp

ANS: A

	Feedback
A	Unlike caries, periodontal disease affects the tissues supporting the teeth, including the gingiva, periodontal ligament, cementum, and alveolar bone.
B	Enamel is not a supporting tissue of the teeth and therefore is not affected by periodontal disease.
C	Dentin is not a supporting tissue of the teeth and therefore is not affected by periodontal disease.
D	Pulp is not a supporting tissue of the teeth and therefore is not affected by periodontal disease.

DIF: Knowledge REF: p. 1 OBJ: 2
TOP: CDA, GC, V. A.1b. Patient Education and Oral Health Management
MSC: NBDHE, 3.0 Planning and managing dental hygiene care, 3.3.2.1 Dental Caries

29. What is a significant cause of dental caries and periodontal disease in older adults?
- Diet
 - Health
 - Salivary flow
 - Brushing habits

ANS: C

	Feedback
A	Poor diet may contribute to caries formation and periodontal disease, but it requires additional factors to produce results.

B	Poor health may contribute to caries formation and periodontal disease, but it requires additional factors to produce results.
C	Many older individuals experience decreased salivary production, which limits the body's oral immune response and promotes both caries and periodontal disease.
D	Poor brushing habits may contribute to caries formation and periodontal disease but require additional factors to produce results.

DIF: Knowledge REF: p. 3 OBJ: 2
TOP: CDA, GC, V. A.1b. Patient Education and Oral Health Management
MSC: NBDHE, 3.0 Planning and managing dental hygiene care, 3.3.2.1 Dental Caries

30. Of the following, which material would not be used for an intracoronal restoration?
- Amalgam
 - Porcelain
 - Composite resin

ANS: B

Feedback	
A	Cavity preparations may be restored with materials such as amalgam, resin composites, cast alloys, or ceramics, or less often by gold foil.
B	Porcelain is an indirect placement material that is fabricated in the dental laboratory and cemented into place.
C	Cavity preparations may be restored with materials such as amalgam, resin composites, cast alloys, or ceramics, or less often by gold foil.

DIF: Comprehension REF: p. 4 OBJ: 3
TOP: CDA, GC, III, B, 1, Describe how to prepare, mix, deliver, and store restorative materials, including but not limited to a. amalgam, c. composites
MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and manipulation of materials

31. Which of the following would not be considered an extracoronal, or indirect placement, restoration?
- Amalgam
 - Veneer
 - Crown
 - Onlay

ANS: A

Feedback	
A	Extracoronal restorations are not conservative preparations and require a material strong enough to cover and support the exterior surfaces of the tooth.
B	Veneers are extracoronal restorations that are fabricated in the dental laboratory.
C	Crowns are extracoronal restorations that are fabricated in the dental laboratory.
D	Onlays are extracoronal restorations that are fabricated in the dental laboratory.

DIF: Knowledge REF: p. 5 OBJ: 3
 TOP: CDA, GC, III, B, 1, Describe how to prepare, mix, deliver, and store restorative materials, including but not limited to a. amalgam, c. composites
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and manipulation of materials

32. How would a permanent three-unit bridge be classified?
- Indirect restoration
 - Direct restoration
 - Intracoronaral
 - Extracoronaral
 - Both A and D are correct.

ANS: E

	Feedback
A	A permanent three-unit bridge is made outside of the mouth; therefore it is an indirect restoration.
B	A direct restoration is placed directly into the tooth at the time of preparation.
C	An intracoronaral restoration is placed directly into the tooth either by way of an immediate restorative material or a cemented direct restoration.
D	A permanent three-unit bridge, is comprised of extracoronaral restorations soldered together into a single unit.
E	Answers A and D are both correct.

DIF: Comprehension REF: p. 11 OBJ: 5
 TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and manipulation of materials

33. How would a composite resin restoration be classified?
- Direct restoration
 - Indirect restoration
 - Intracoronaral restoration
 - Extracoronaral restoration
 - Both A and C

ANS: E

	Feedback
A	A composite resin restoration is placed directly into the mouth.
B	An indirect restoration is fabricated in the dental laboratory.
C	A composite resin restoration is placed intracoronally.
D	An extracoronaral restoration covers the outside surfaces of a tooth and is cemented into place.

E	Both A and C are correct.
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DIF: Comprehension REF: p. 10 OBJ: 5
 TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and manipulation of materials

34. Endosseous dental implants rely on which method to retain them permanently?
- Osseointegration
 - Bone graft
 - Resin cement
 - Pins or posts
 - Both A and B

ANS: E

Feedback	
A	Osseointegration is the process whereby new bone grows in and around the implant to retain it in place.
B	A bone graft might be used prior to the implant being prepared and placed when there is not enough natural bone to retain the implant.
C	Resin cement is not a viable option.
D	Pins and posts are used to retain intraoral and extraoral restorations when not enough tooth structure remains.
E	Both A and B are correct.

DIF: Knowledge REF: p. 12 OBJ: 5
 TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials
 MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.1 Properties and manipulation of materials

35. Of the following, which is not an advantage of finishing and polishing a restoration?
- Minimized stain
 - Minimized corrosion
 - Minimized recurrent caries
 - Minimized plaque retention

ANS: D

Feedback	
A	The statement is an advantage.
B	The statement is an advantage.
C	The statement is an advantage.
D	Restoration also may be polished to minimize plaque retention and corrosion, and other abrasives may be used to finish the edges (margins) of the restoration to help prevent the recurrence of caries, but staining will not be minimized.

DIF: Comprehension REF: p. 12 OBJ: 6

TOP: CDA, GC, III.D.1. Select and describe how to manipulate the various finishing, polishing and cleaning agents MSC: NBDHE, 5.0 Using preventive agents, 5.1.2 Toxicology

36. Fluoride _____ are commonly used to deliver fluoride to an area prepared for restoration.
- gels
 - rinses
 - varnishes
 - filling materials

ANS: C

	Feedback
A	Fluoride gels are highly effective at preventing caries through topical applications.
B	Fluoride rinses are highly effective at preventing caries through topical applications.
C	Fluoride gels, rinses, and varnishes are highly effective at preventing caries. Fluorides also have been incorporated into direct esthetic filling materials and cements.
D	Fluoride varnishes are highly effective at preventing caries through topical applications.

DIF: Comprehension

REF: p. 47

OBJ: 6

TOP: CDA, GC, III.B.1. Describe how to prepare, mix, deliver, and store restorative materials

MSC: NBDHE, 5.0 Using preventive agents, 5.1.1 Mechanisms of action

SHORT ANSWER

1. Compare and contrast intracoronal restorations with extracoronal restorations.

ANS:

Intracoronal restorations are used to repair damage that is restricted to the internal parts of the tooth. Extracoronal restorations are used if the damage to the tooth is extensive, because they extend beyond the interior of the tooth to cover the cusp tips and other external surfaces.

DIF: Analysis REF: pp. 4-5 OBJ: 3

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge preparation/cementation

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

2. Identify an advantage to a patient who wears a partial denture.

ANS:

Removable partial dentures are advantageous to the patient from the standpoint of cleaning and inspection of the remaining teeth.

DIF: Knowledge

REF: p. 12

OBJ: 5

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to e. crown and bridge preparation/cementation

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

3. Discuss the role of dental materials in treating trauma-related tooth injuries.

ANS:

Restorative materials are used to repair teeth, stabilize them until the supporting tissues heal, or replace them.

DIF: Comprehension

REF: p. 12

OBJ: 5

TOP: CDA, GC, II. B.2. e. Select and describe how to prepare tray setups and all necessary armamentaria for chairside dentistry and dental emergency procedures, including but not limited to cc. temporary restoration

MSC: NBDHE, 6.0 Providing Supportive Treatment Services, 6.5 General

4. Describe the purpose of mouth protectors.

ANS:

Mouth protectors are made of polymers that absorb the energy of facial blows and prevent this energy from affecting the teeth and facial structures.

DIF: Comprehension

REF: p. 12

OBJ: 6

TOP: CDA, GC, IV. B. 3. Laboratory materials and procedures

MSC: NBDHE, 5.0 Using Preventive Agents, 5.3 Other preventive agents