

RESTORATIVE DENTISTRY III
MIDTERM EXAMINATION

Oct 25, 2007

Instructions:

- Verify that you have an examination booklet with 30 questions.
- Write your name on the computer answer sheet as well as your personal identification number where indicated and blacken the appropriate circles with a # 2 pencil.
Test scores will be posted by PINs.
- Sign and date the back of the computer answer sheet.
- **Important !** Write the test code number (11 or 22) on the computer answer sheet in the “Test Code” field under “optional codes”, and blacken the appropriate circles.
- For each question answered, blacken the appropriate circle on the computer answer sheet corresponding to the letter of your choice.
- Students are not permitted to ask questions of the proctors during the examination . Do your best to answer each question with the information provided.
- When you have completed the examination , turn in your answer sheet . You may keep the question booklet.

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TEST CODE 11

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1. The requirements of an abutment for a fixed partial denture are not as stringent as that for removable partial dentures.

- a) True ☒ b) False

2. Which of the following situations would not generally be better served by a removable partial denture over a fixed partial denture?

- ☒ a) A large tongue
b) Severe tissue loss of edentulous ridge
c) Very short abutment teeth
d) Periodontally weakened primary abutments
e) Edentulous spaces greater than two posterior teeth

3. (1) A "dry mouth" creates a poor environment for a fixed partial denture as (2) the margins of the retainers will be at greater risk for recurrent caries?

- ☒ a) Both statements are true ☒ c) # 1 is false; # 2 is true
☒ b) # 1 is true; # 2 is false ☒ d) Both are false

4. The retainers used for most dental implant systems require a greater degree of abutment alignment precision than do the retainers for a tooth-supported FPD.

- ☒ a) True b) False

5. When a cantilever FPD is employed – which of the following is generally not preferred?

- a) Long clinical crown abutment
☒ b) One abutment
c) Light to no occlusal contact on pontic
d) Replacement of one tooth

6. Regarding clinical decision making for dental prosthesis, which of the following are considered factors to be weighed?

- | | | |
|-----------------------------------|---------------|--|
| 1-Initial & long term costs | a) None | d) 1, 3 & 4 |
| 2-Esthetic potential | b) 1 & 2 only | <input checked="" type="radio"/> e) All four |
| 3-Predicted longevity | c) 2, 3 & 4 | |
| 4-Patient decision & expectations | | |

7. According to "Ante's law" - the sum of the periodontal ligament area of the abutment teeth must be equal to or greater than the periodontal area of the missing teeth.

- ☒ a) True b) False

8. Teeth that have been pulp capped in the process of preparing the tooth should be endodontically treated prior to being used as FPD abutments.

☒ (a) True b) False

9. Which of the following is considered the optimum crown-root ratio for a tooth to be utilized as a FPD abutment?

a) 3-2 ☒ (b) 2-3 c) 2-1 d) 1-2 e) 1-1

10. (1) The 3-unit FPD replacing a maxillary canine is more favorable than that replacing a mandibular canine. (2) In the maxilla, the forces are directed outward and the pontic lies further outside the interabutment axis.

a) Both #1 & #2 are true ☒ (c) #1 is false; #2 is true
b) #1 is true; #2 is false d) Both are false

11. When fabricating a provisional restoration for # 9-11, which of the following are general guidelines?

- 1-Proximal contacts are progressively closer to the gingival (midline-distally)
- 2-Incisal embrasures become progressively larger (midline-distally)
- 3-Incisal embrasures become larger with age & wear
- 4-Incisal edge of lateral incisors is slightly off the occlusal plane

~~a) 1, 3 & 4~~ ~~b) 2, 3 & 4~~ e) All four
☒ (d) 1, 2 & 4

12. When using poly (methyl methacrylate) with the indirect rather than the direct provisional fabrication technique,

1-the fit is improved as is 2- pulpal protection.

☒ (a) Both #1 & #2 are true c) #1 is false; #2 is true
b) #1 is true; #2 is false d) Both are false

✓ 13. The polycarbonate provisional crown is used for single units only, never with multiple units.

☒ (a) True ☒ (b) False

14. Which of the following types of resins used for provisional restorations is noted for good margins, good polishability and high volumetric shrinkage?

☒ (a) Poly (methyl methacrylate) d) Poly (ethyl methacrylate)
~~b) Bis acryl composite~~ ~~e) VLC urethane~~
c) Poly (vinyl ethyl methacrylate)

✓ 15. Which of the following are associated with the porcelain to metal chemical bond?

- 1-Firing in an oxidizing atmosphere
- ✓ 2-Formation of an oxide layer on the metal
- ✓ 3-Metal surface oxide bonds to similar oxidized dentin layer of porcelain
- ✓ 4-Failure or fracture usually occurs at the porcelain metal interface

☒ (a) 1 & 2 only c) 2, 3 & 4 e) All four
~~b) 1, 2 & 3~~ d) 1, 3 & 4

16. Compressive forces of M-C restorations result from a slight difference in coefficient of thermal expansion, causing the powder to "draw" toward the metal coping when the restoration cools after firing.
☒ a) True b) False
17. Dental porcelains are significantly stronger in compression than tension.
☒ a) True b) False
18. The choice of an M-C alloy will depend on which of the following factors?
 1-Corrosion resistance a) 1, 3 & 4
 2-Biocompatibility b) 2, 4 & 5
 3-Cost c) 2, 3, 4 & 5
 4-Rigidity d) 1, 3, 4 & 5
 5-Compatibility with specific porcelain ☒ e) All five
19. As stated in Shillingburg, the melting range of the alloy used in the coping for the M-C restoration must be _____° to _____° F higher than the firing temperature of the porcelain applied to it.
 a) 100 to 200 c) 500 to 700 e) 200 to 700
☒ b) 300 to 500 d) 500 to 1000
20. The metal coping of the M-C restoration should exhibit similar characteristics as wax pattern cut-back and include:
 1-A beveled cavo-surface metal porcelain junction a) 1, 2 & 4 d) 3 & 4
 2-Even flowing convex contours of veneering areas b) 2 & 3 e) All four
 3-Avoid sharp angles in veneering area ☒ c) 2, 3 & 4
 4-In general, the desired porcelain thickness is 1 mm. *col e*
21. The porcelain-metal junction must not be placed too close to the incisal edge on maxillary anterior teeth or – 1) incisal translucency will be destroyed and/or 2) the chance of porcelain fracture will be increased.
☒ a) Both statements # 1 & 2 are true c) # 1 is false; # 2 is true
 b) # 1 is true; # 2 is false d) Both #1 & 2 are false
22. After casting divestment and before porcelain application, which of the following are recommended?
☒ 1-Rough finish veneering areas with aluminum oxide stones a) 1, 3 & 5
☒ 2-Prepare multi-directional striations on veneering surface b) 1, 2 & 3
☒ 3-Measure for minimum coping thickness c) 2, 3, 4 & 5
☒ 4-Perform oxidation heat treatment on coping ☒ d) 1, 3, 4 & 5
☒ 5-Degassing helps to release hydrogen gas e) All five
23. The first opaque application is intended to:
☒ 1-Thoroughly mask the metal 2-Wet and penetrate the metal striations
 a) Both # 1 & 2 are true ☒ c) # 1 is false; # 2 is true
 b) # 1 is true; # 2 is false d) Both # 1 & 2 are false

24. When applying porcelain to the to the M-C coping, too much vibration can result in:

- 1-Porcelain pulling away from the margins ☒ a) 1 & 2 ☒ d) 2, 3 & 4
- 2-Porcelain becoming too dry ☐ b) 1, 2 & 3 ☐ e) All four
- 3-Discoloration ☒ c) 3 & 4
- 4-Poor glaze

25. Shillingburg states that during porcelain firing there is usually shrinkage of approximately _____%.

- a) 10 ☒ b) 20 c) 30 d) 40 e) 50

26. The maximum thickness of the opaque layer on the PFM coping is:

- a) 0.1 mm b) 0.2 mm ☒ c) 0.3 mm d) 0.5 mm e) 1 mm

27. According to the "Crack propagation" theory, when porcelain is stressed in tension, small flaws tend to open up and propagate resulting in low tensile strength.

- ☒ a) True b) False

28. Which of the following statements are characteristic of incisal porcelain application to the dentin porcelain layer?

- 1 -Light vibration reduces air entrapment ☒ a) 1 & 2 ☒ d) 1, 3 & 4
- 2-There is higher moisture content than for opaque ☒ b) 1 & 3 ☐ e) All four
- 3-Remove any excess from inside the coping ☒ c) 1, 2 & 3
- 4-Add to dentin cut-back area, slightly overbuilding

29. When placing the PFM coping into the oven when applying porcelain, place the predominant veneering area:

- a) Facing front of oven ☒ b) Facing the side of oven c) Doesn't matter

30. Use of the vacuum is not necessary for the glaze treatment.

- ☒ a) True b) False