

1. b. Composite should always be layered due to shrinkage upon curing. The layering technique prevents voids in the fill of the restoration.

2. d. A precise series of steps must be followed while preparing and placing a composite restoration into the tooth for a proper, long-lasting bond.

3. c. A Class III restoration is located on the anterior interproximal surfaces. While placing the composite restoration, a mylar strip must be placed in between the prepared tooth and the tooth next to it to avoid bonding the two interproximal surfaces together. A mylar strip allows the ultraviolet light from the curing unit to access and penetrate the uncured composite material.

4. b. A hollenback carver is used in amalgam procedures to carve the interproximal surfaces of a freshly placed amalgam restoration. It does not polish a composite restoration.

5. b. A curing light emits ultraviolet light, which causes polymerization to occur in the resin-based materials.

6. c. In dental terminology, cured means to set or harden. This occurs with many of the light-sensitive and/ or resin-based materials.

7. a. Composites and other resin-based materials are typically very sensitive to moisture. It is recommended by composite manufacturers that a rubber dam be utilized while placement of this type of material is occurring. Saliva, water, and moisture from the patient's breath can all contaminate the bond strength of the composite restoration. The rubber dam aids in preventing this.

8. b. The term flash refers to excess bonding and composite materials remaining on the tooth structure following the curing process. Since bonding and composite materials are tooth colored, excess material is difficult to see. Flash is usually located during the polishing process.

9. d. A discoid-cleoid is a carving instrument used on the occlusal surface of freshly placed amalgam. It is not classified as a hand carver or a rotary instrument capable of tooth preparation or decay removal.

10. b. A base is placed on the floor of a tooth preparation to soothe and insulates the pulp from hot and cold temperatures.

11. c. Always follow the manufacturer's instructions when mixing any dental material. The instructions will be included with each package.

12. e. Cavity varnishes seal the dentinal tubules, are liquid so they flow easily, evaporate quickly, and should not be placed under a glass ionomer or a resin restoration because they inhibit the bond strength of the material.

13. c. Calcium hydroxide is known in dentistry as a liner that stimulates secondary dentin. It is placed on the floor of the cavity preparation just above the pulp.

14. c. One of the benefits of using glass ionomers is that they contain fluoride, which makes them anticariogenic. This continual release of fluoride strengthens the enamel and dentin.

15. b. [Oil](#) of cloves is an ingredient in ZOE that is very soothing to the pulp.

16. e. Gypsum materials are various types of plasters and stones with varying strengths, which are utilized for different purposes in dentistry.

17. e. Either ZOE or non-eugenol temporary cement would be acceptable when cementing an aluminum temporary restoration. The permanent restoration may be an all-porcelain crown and, in that case, temporary cement with no eugenol should be used. Answers a and b are both permanent cements, and should not be used for temporary restorations.

18. e. Either ZOE or non-eugenol temporary cement would be acceptable when cementing a polycarbonate temporary restoration. The permanent restoration may be an all-porcelain crown and, in that case, temporary cement with no eugenol should be used. Answers a and b are both permanent cements, and should not be used for temporary restorations.

19. c. According to the manufacturer, temporary cement is designed to last up to six months. However, most temporary cements are used for only two weeks until the permanent cast restoration is made by the lab.

20. b. This is the correct sequence for placing an amalgam restoration.

21. d. This is the sequence of instrumentation for an amalgam restoration.

22. d. Sealant material is a preventive measure used to prevent occlusal decay.

23. e. This is the correct sequence for placement of a sealant.

24. a. Gutta percha is the only dental material available that will flow into the canals of root-canal-treated teeth when heated.

25. e. Periodontal dressings are supplied as light-cured materials; they can be eugenol-based and non-eugenolbased.

26. b. A bite registration is taken after the tooth is prepped to demonstrate to the lab the amount of clearance from the prepped tooth to the surrounding natural teeth and anatomy of the occlusion.

27. c. The patient needs to apply intraoral force to the permanent crown during cementation to ensure the restoration has seated all the way to the margin. An orangewood stick or cotton roll is helpful in exerting proper intraoral forces along the cast restoration.

28. b. A slightly high occlusion can be adjusted by the dentist at the chair. The other examples would need to be repaired at the lab with the expertise of the lab technician.

29. b. A gingival margin trimmer is a hand-cutting instrument used during tooth preparation. It does not have a place on a crown and bridge cementation setup.

30. a. An onlay is a cast restoration that covers the cusps of the tooth but leaves the facial and lingual aspects of the tooth intact.

31. a. Alginate is not used as a final impression material because it is not an accurate elastomeric material. Final impressions must be extremely accurate.

32. e. The largest size retraction cord is a size 3. It is used in large sulcular areas.

33. c. Heavy- or medium-bodied impression material is also known as "tray" material because it is placed in a tray by the assistant just prior to placement in the mouth.

34. c. Acid etch, also known as tooth conditioner, should be placed on the prepared tooth for 15–20 seconds. If left longer, the acid etch could over-etch the tooth structure, causing sensitivity. If rinsed off too soon, it will cause compromised bond strength, and the restoration could fail.

35. a. Currently, ten years is the approximate life span of a properly placed sealant. The sealant will be examined at each six-month recall.

36. a. Trituration is the process of mixing. Amalgam capsules are placed into a triturator or amalgamator to combine the mercury and alloy powder to make the amalgam restoration.

37. c. It is not advised to look at the curing light when curing a resin-based material. Prolonged and frequent staring at this light over time will cause damage to the retina.

38. c. Sealant material is a form of flowable composite. This makes application easier, as it will flow into the fissures and grooves on the occlusal surfaces of posterior teeth.

39. c. The lathe is a machine to which a rag wheel is attached. The lathe spins in a circular motion and uses lab pumice to create a polished, smooth, and shiny appearance to the new temporary crown.

40. a. The smear layer is secreted by the dentinal tubules when they have been cut by the hand piece and bur. The dentin is trying to repair itself. This smear layer is removed by etching prior to placement of a resinbased material.

41. b. A final or master impression is obtained with elastomeric impression material and is capable of giving the best reproduction of the prepared margin.

42. d. Sealants are placed on the occlusal surfaces of posterior teeth into the pits and fissures.

43. e. PVS, polyether, and polysulfide are the three elastomeric impression materials used in dentistry for final impressions.

44. c. Sealants are a preventive restoration to prevent decay from occurring on the occlusal surfaces of posterior teeth.

45. a. Slow but steady increments from one side of the impression is the proper way to pour plaster into the impression and lessen the number of air bubbles in the set model.

46. c. A vibrator is used to lessen the amount of air trapped in the plaster or stone mixture just prior to pouring into an impression.

47. a. A vacuum former, also known as a "suck down" machine, is used to soften the bleach tray material by heating the material slowly. It then provides a rush of air to seal the material around the model, creating a custom bleach tray for the patient.

48. d. Bite registration wax is the wax of choice when using wax for this purpose. Alternatively, bite registration can also be taken with a PVS elastomeric material.

49. c. Glass particles, silicate, and quartz are all additives placed in filled resins. They add extra strength to the composite material itself. The operator will choose a filled or unfilled resin, based on his or her preferences. One is not better than the other.

50. e. An in-office bleach procedure will always have a higher percentage concentration than the take-home variety. This provides the dental office the opportunity to produce rapid results within an hour or two. The take-home bleach concentration ranges from 5% to 20% and up.