Expanded Function Dental Assistant (EFDA) Board Practice Exam (Sample)

Study Guide

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Questions

1. In amalgam restorations, the elimination of voids is primarily important for which reason?

- **A. A. Better visual appearance**
- **B. B. Decreased risk of fracture**
- **C. C. Enhanced marginal integrity**
- **D. D. Reduction in thermal sensitivity**

2. Which of the following is not a filler particle found in composite resin?

- **A. Quartz**
- **B. Silica**
- **C. Bis-GMA**
- **D. Barium glass**

3. How would you describe and correct a margin where the exploring point only bumps up as it passed from tooth to restoration?

- **A. An overextension or flash, correct with additional carving**
- **B. An open margin, redo the restoration**
- **C. A submarginal area, correct with finish and polish**
- **D. Over extension or flash, it will correct during normal occlusal forces**

4. Which characteristic of amalgam is improved by the presence of zinc?

- **A. Strength**
- **B. Corrosion resistance**
- **C. Setting time**
- **D. Thermal conductivity**

5. Which characteristic is NOT true about glass ionomers?

- **A. Chemically bonds to dentin**
- **B. Releases fluoride**
- **C. Used as a cement, base, liner, or permanent restoration**
- **D. Unaffected by moisture when placing**

6. Which of the following is a common property of dental cements?

A. High tensile strength

B. Low solubility in oral fluids

C. High viscosity

D. Rapid setting time

7. What is a common instrument used to check for overhangs after finishing an amalgam restoration?

A. Sickle scaler

B. Explorer

C. Carver

D. Burnisher

8. What is the largest embrasure in dental anatomy?

A. Buccal

B. Lingual

C. Facial

D. Interproximal

9. What tool would be used to eliminate gingival overhangs during the finishing of an amalgam restoration?

A. Finishing bur

B. Strip bur

C. Green stone

D. White stone

10. What is the primary consideration when restoring a tooth with a large class IV composite?

A. Minimizing patient discomfort.

B. Ensuring strength and durability of the restoration.

C. Achieving optimal aesthetic result.

D. Reducing chair time.

Answers

1. C
2. C
3. A
4. B
5. B
6. B
7. B
8. B
9. A
10. C

Explanations

1. In amalgam restorations, the elimination of voids is primarily important for which reason?

A. A. Better visual appearance

B. B. Decreased risk of fracture

C. C. Enhanced marginal integrity

D. D. Reduction in thermal sensitivity

In amalgam restorations, the elimination of voids is crucial for enhancing marginal integrity. Voids can act as points of weakness within the restoration, which can compromise the seal between the restoration and the tooth structure. When marginal integrity is improved, the likelihood of bacteria entering the space between the restoration and the tooth is diminished, leading to a lower risk of secondary caries and preserving the longevity of the restoration. Moreover, better marginal integrity ensures a more effective distribution of forces during chewing, which is vital for maintaining the restoration's structural integrity over time. The reduction of voids ultimately contributes to a stronger bond between the tooth and the restoration, enhancing overall performance and durability. While better visual appearance, decreased risk of fracture, and reduction in thermal sensitivity are important considerations in amalgam restorations, they are not directly linked to the elimination of voids as strongly as enhanced marginal integrity is. This highlights the primary reason for addressing voids in the preparation and placement of amalgam materials.

2. Which of the following is not a filler particle found in composite resin?

A. Quartz

B. Silica

C. Bis-GMA

D. Barium glass

Composite resins are dental materials used for restorative procedures, and they typically consist of a resin matrix and filler particles. The filler particles play a crucial role in enhancing the mechanical properties, wear resistance, and aesthetic qualities of the composite material. Quartz, silica, and barium glass are all common filler materials used in the formulation of composite resins. These fillers provide strength and stability to the resin while also influencing its optical properties to better match natural teeth.
Bis-GMA, on the other hand, stands for bisphenol A-glycidyl methacrylate. It is a resin monomer that forms part of the matrix in composite resins but does not serve as a filler particle. Its primary function is to provide the structural framework of the composite material, allowing it to bond with fillers and harden upon curing. This distinction is key to understanding the composition and function of composite resins in dental applications.

3. How would you describe and correct a margin where the exploring point only bumps up as it passed from tooth to restoration?

A. An overextension or flash, correct with additional carving

B. An open margin, redo the restoration

C. A submarginal area, correct with finish and polish

D. Over extension or flash, it will correct during normal occlusal forces

The description indicates a situation where the explorer only slightly catches at the junction between the tooth and the restoration, suggesting the presence of excess material—often referred to as flash or overextension. This means that there is a slight over-contouring of the restoration beyond the natural tooth structure. To address this issue, additional carving is necessary to contour the restoration properly and create a smooth transition at the margin. This is crucial not only for aesthetics but also for the restoration's function and longevity, as overextensions can trap plaque and bacteria, leading to further complications. The other choices involve descriptions that do not accurately characterize the situation presented in the question. For example, an open margin typically indicates a gap where bacteria could ingress, and merely redoing the restoration may not always be necessary if the issue can be corrected with carving. Likewise, a submarginal area implies the restoration is below the margin of the tooth, which is different from the described scenario, where the bump suggests excess material rather than deficiency. Lastly, relying on normal occlusal forces to correct overextension or flash is not advisable, as these areas require proactive finishing and shaping to ensure proper adaptation and function.

4. Which characteristic of amalgam is improved by the presence of zinc?

A. Strength

B. Corrosion resistance

C. Setting time

D. Thermal conductivity

The presence of zinc in amalgam significantly enhances its corrosion resistance. Zinc acts as a scavenger, which can help to minimize the production of corrosion by-products that typically occur when mercury reacts with the amalgam components. This improved corrosion resistance is particularly important because it contributes to the longevity and durability of the restoration in a moist oral environment. Corrosion is a critical factor that can lead to failure of dental materials, as it can cause the degradation of the material structure and the release of harmful by-products. Thus, amalgam with zinc provides an added layer of protection and stability, making it suitable for a wider range of clinical applications, particularly in areas prone to moisture and oral fluids. In contrast, the other characteristics such as strength, setting time, and thermal conductivity are affected by different factors related to the composition and handling of the amalgam rather than the inclusion of zinc.

5. Which characteristic is NOT true about glass ionomers?

A. Chemically bonds to dentin

B. Releases fluoride

C. Used as a cement, base, liner, or permanent restoration

D. Unaffected by moisture when placing

Glass ionomer cements are known for several key characteristics that make them valuable in dentistry. One of their most notable traits is the ability to chemically bond to dentin, which enhances retention and reduces the risk of microleakage at the margins of restorations. This chemical bonding occurs due to the interaction between the acidic components of glass ionomers and the calcium in the tooth structure. Another important feature of glass ionomers is their ability to release fluoride, which contributes to caries prevention around the restoration area. The fluoride release is beneficial as it helps in remineralizing adjacent tooth structure and provides ongoing protection. Glass ionomers can be utilized in various clinical applications, including as cements, bases, liners, and even permanent restorations in specific situations, making them versatile materials in restorative dentistry. However, when it comes to being unaffected by moisture during the placement of these materials, this is not true. Glass ionomers are sensitive to moisture, and their properties can be compromised if they are placed in a moist environment. For optimal results, it is critical to manage moisture control effectively when working with glass ionomers, ensuring that the surface is dry and free from contaminants during application. Thus, the statement regarding glass ionomers being unaffected by moisture when placing

6. Which of the following is a common property of dental cements?

A. High tensile strength

B. Low solubility in oral fluids

C. High viscosity

D. Rapid setting time

Low solubility in oral fluids is a common property of dental cements, making it essential for their function in dental applications. Dental cements are used for various purposes, including as a luting agent for crowns, bridges, and other restorations. Their effectiveness relies heavily on their ability to remain stable and intact in the moist environment of the mouth, where exposure to saliva and other fluids occurs. If dental cements had high solubility, they would dissolve over time, compromising their bond strength and the longevity of the restoration. Therefore, the formulation of dental cements includes materials that minimize solubility, contributing to the durability and reliability of dental work over extended periods. This property is crucial to ensure that restorations function well and maintain their structural integrity in the oral environment. In contrast, elements such as high tensile strength, high viscosity, and rapid setting time, while they might be desirable in certain contexts, are not universally applicable properties of all dental cements. Each of these attributes could vary significantly among the various types of dental cements used in practice, making the low solubility in oral fluids a more consistent and defining characteristic across the board.

7. What is a common instrument used to check for overhangs after finishing an amalgam restoration?

A. Sickle scaler

B. Explorer

C. Carver

D. Burnisher

The explorer is a common instrument used to check for overhangs after finishing an amalgam restoration due to its design and functionality. An explorer has a pointed, tactile tip that allows the dental professional to feel and detect any irregularities on the surface of the restoration and the adjacent tooth structure. By using the explorer, the practitioner can assess whether the amalgam material extends beyond the tooth margins, which could lead to potential issues such as food traps, plaque accumulation, or patient discomfort. In contrast, while the other instruments may serve specific purposes in various dental procedures, they are not ideally suited for this particular task. For example, a sickle scaler is primarily used for scaling and removing calculus from tooth surfaces, while a carver is designed to shape and contour the restoration material during placement rather than for final examination. A burnisher is used to smooth the surface of the restoration but does not provide the tactile feedback necessary to accurately assess overhangs. Thus, the explorer stands out as the preferred choice for checking overhangs following an amalgam restoration.

8. What is the largest embrasure in dental anatomy?

A. Buccal

B. Lingual

C. Facial

D. Interproximal

The largest embrasure in dental anatomy is indeed the lingual embrasure. Embrasures are the spaces formed by the contours of adjacent teeth, and they allow for the passage of food during chewing, as well as providing a way for the interproximal space to accommodate for the natural movements of the teeth. The lingual embrasure is generally larger than other embrasures, such as the buccal or facial types, due to the anatomical layout of the dentition. In the arrangement of teeth, the lingual surfaces tend to be more expansive, especially in posterior teeth where the occlusal areas allow for more space near the tongue. This contributes to the larger size of the lingual embrasure. Understanding the size and function of different embrasures is important in dental practices, as it influences oral hygiene practices and the design of dental restorations. In contrast, the buccal and facial embrasures are typically smaller due to the proximity of teeth to the cheeks and lips, and the interproximal space, while significant for cleaning and flossing, doesn't exceed the lingual space in size.

9. What tool would be used to eliminate gingival overhangs during the finishing of an amalgam restoration?

A. Finishing bur

B. Strip bur

C. Green stone

D. White stone

The finishing bur is specifically designed for making fine adjustments and refining the surface of restorations, including amalgam restorations. This tool has a unique shape and grit that allows for a controlled reduction of material. Its precision aids in eliminating gingival overhangs, which are excess materials that can negatively impact both the aesthetics and health of the surrounding gingival tissue. Finishing burs typically have a higher number of cutting edges and a finer grit compared to other instruments, making them ideal for smoothing and shaping the margins of restorations. Properly using a finishing bur allows an Expanded Function Dental Assistant to achieve a seamless transition between the restoration and the tooth structure, ensuring that there are no sharp edges or rough areas that could irritate the gum tissue. Other tools like strip burs, green stones, and white stones serve different purposes in dental procedures. For instance, strip burs are often used for refining and finishing interproximal areas but may not be as effective in removing gingival overhangs specifically. Green stones and white stones are primarily used for contouring and polishing rather than for eliminating overhangs. Therefore, in the context of the question, the finishing bur stands out as the best tool for this specific task.

10. What is the primary consideration when restoring a tooth with a large class IV composite?

A. Minimizing patient discomfort.

B. Ensuring strength and durability of the restoration.

C. Achieving optimal aesthetic result.

D. Reducing chair time.

When restoring a tooth with a large class IV composite, the primary consideration is achieving optimal aesthetic result. Class IV restorations typically involve repairs to the anterior teeth, which are highly visible and play a significant role in an individual's smile and overall appearance. Therefore, it's essential that the restoration closely mimics the natural color, translucency, and overall aesthetics of the surrounding teeth. The materials used for these types of restorations are selected not just for their functional properties, but also for their aesthetic qualities. The ability to layer composite materials and match the shade accurately allows the dentist to create a restoration that is nearly indistinguishable from the natural tooth. While other factors such as minimizing patient discomfort, ensuring strength and durability of the restoration, and reducing chair time are certainly important considerations, they take a backseat to aesthetics in the context of class IV restorations. The visible nature of these repairs means that a successful aesthetic outcome is paramount.