

NEET MDS 2024 Memory Based Question Paper With Solution

Time Allowed :3 Hours 20 Minutes

Maximum Marks :720

Total Questions :200

General Instructions

Read the following instructions very carefully and strictly follow them:

- (A) The NEET MDS Exam will be structured with a total of 720 marks.
- (B) The total duration of the exam is 3 Hours 20 Minutes.
- (C) The exam will be divided into 3 sections:
 - 1. General Anatomy, Physiology, and Biochemistry.
 - 2. General Pathology, Microbiology, and Pharmacology.
 - 3. Dental and Oral Pathology.
- (D) Each section will contain multiple-choice questions (MCQs) with four options.
- (E) Negative marking will apply for incorrect answers. For each incorrect answer, 1 mark will be deducted.
- (F) Ensure that you read each question carefully before answering.
- (G) No electronic devices, including calculators or mobile phones, are allowed inside the examination hall.
- (H) Candidates must carry their Admit Cards and valid ID proof to the examination center.

1. Winterbottom's sign of trypanosomiasis refers to?

- (1) Swelling of lymph nodes in the neck
- (2) Bilateral swelling of the feet
- (3) Presence of fever and chills
- (4) Skin rash on the abdomen

Correct Answer: (1) Swelling of lymph nodes in the neck

Solution:

Winterbottom's sign is a characteristic sign of African trypanosomiasis (sleeping sickness), where swelling of the posterior cervical lymph nodes (often bilateral) occurs. It is a prominent feature of the disease, caused by the parasitic infection transmitted by the tsetse fly.

Quick Tip

When studying parasitic infections, focus on common diagnostic signs such as Winterbottom's sign for trypanosomiasis.

2. Which sinus opening is not present in the middle meatus?

- (1) Maxillary sinus
- (2) Frontal sinus
- (3) Ethmoidal sinus
- (4) Sphenoid sinus

Correct Answer: (4) Sphenoid sinus

Solution:

The sphenoid sinus does not open into the middle meatus. The sphenoid sinus opens into the superior meatus of the nasal cavity, while the maxillary, frontal, and anterior ethmoidal sinuses open into the middle meatus.

Quick Tip

When studying sinus anatomy, remember the different meatuses and which sinuses drain into each.

3. How is age estimation from an OPG (Orthopantomogram) of a child done?

- (1) By the eruption sequence of teeth
- (2) By the development of the root apex
- (3) By the length of the crown
- (4) By the shape of the jaw

Correct Answer: (1) By the eruption sequence of teeth

Solution:

Age estimation from an OPG in children is primarily done by evaluating the eruption sequence and developmental stages of the teeth. The timing of eruption provides valuable information regarding the age of the child, typically within a certain range based on population norms.

Quick Tip

When estimating age from dental X-rays, focus on the sequence and developmental stages of primary and permanent teeth.

4. What is the thick band-like gingiva on the canine called?

- (1) Mucogingival junction
- (2) Gingival recession
- (3) Gingival hyperplasia
- (4) Gingival collar

Correct Answer: (4) Gingival collar

Solution:

A thick band-like gingiva around the canine teeth is often referred to as a gingival collar. It is the normal gingival tissue that surrounds the tooth and provides a protective barrier to the underlying structures. The term *gingival collar* describes the uniformity and appearance of this gingiva in healthy conditions.

Quick Tip

When studying gingival anatomy, focus on the features like the gingival collar that serve protective roles around teeth.

5. Does interproximal wear result in mesial drift?

- (1) Yes, it can result in mesial drift
- (2) No, it causes distal drift
- (3) No, it causes occlusal wear
- (4) Yes, but only in molars

Correct Answer: (1) Yes, it can result in mesial drift

Solution:

Interproximal wear can lead to mesial drift, where the teeth shift toward the midline of the dental arch. This is commonly observed as teeth naturally move in response to wear, loss of proximal contacts, or occlusal forces. Mesial drift is a normal physiological process in the dentition.

Quick Tip

When studying tooth movement, remember that mesial drift is a gradual process influenced by wear, tooth loss, and occlusion.

6. What is the common feature in McCune-Albright syndrome, Fanconi anemia, and Noonan's syndrome?

- (1) Bone marrow failure
- (2) Developmental delays
- (3) Cardiovascular defects
- (4) Endocrine disorders

Correct Answer: (2) Developmental delays

Solution:

A common feature in McCune-Albright syndrome, Fanconi anemia, and Noonan's syndrome

is developmental delays. These genetic disorders may include physical, cognitive, or developmental delays, along with other specific health problems like endocrine imbalances or bone marrow issues.

Quick Tip

When studying genetic syndromes, focus on the common features such as developmental delays and the specific systems affected by each condition.

7. How is OPG used to identify the age of a child?

- (1) By assessing the shape of the teeth
- (2) By evaluating the eruption of the teeth
- (3) By measuring the length of the jaw
- (4) By identifying calcification stages of teeth

Correct Answer: (2) By evaluating the eruption of the teeth

Solution:

An OPG (Orthopantomogram) is used to assess the eruption stages of a child's teeth, helping in age estimation. The timing of the eruption of primary and permanent teeth provides valuable information regarding the child's developmental age, often within a specific range.

Quick Tip

When using OPG for age estimation, pay attention to the stages of tooth eruption and root development for better accuracy.

8. What is tumor staging classification grade?

- (1) TNM Classification
- (2) FIGO Classification
- (3) Breslow Classification
- (4) Ann Arbor Classification

Correct Answer: (1) TNM Classification

Solution:

The most commonly used tumor staging classification system is the *TNM Classification*, which categorizes tumors based on their size (T), the extent of spread to nearby lymph nodes (N), and whether the cancer has metastasized to distant parts of the body (M). This system helps in determining the severity and treatment options for cancer patients.

Quick Tip

When studying tumor classifications, focus on the TNM system for understanding the stages and prognosis of various cancers.

9. What should be done for a premature baby with breathing difficulty and cyanosis?

- (1) Immediate intubation
- (2) Oxygen therapy
- (3) Intravenous fluids
- (4) Monitor and wait

Correct Answer: (2) Oxygen therapy

Solution:

For a premature baby with breathing difficulty and cyanosis, oxygen therapy is typically the first step in managing the condition. Oxygen supplementation helps improve oxygen saturation levels and may prevent further complications related to respiratory distress in premature infants.

Quick Tip

When managing premature infants with respiratory issues, focus on stabilizing their oxygen levels before considering more invasive interventions.

10. What are border movement and neutral zone while recording muscles?

- (1) Border movement refers to the movement of the mandible, and neutral zone refers to the position where muscles have equal force.
- (2) Border movement refers to the limits of tooth movement, and neutral zone refers to the natural resting position.

(3) Border movement refers to the position of teeth during occlusion, and neutral zone refers to the area of the tongue's influence.

(4) Border movement refers to the jaw's occlusal position, and neutral zone refers to the teeth's contact.

Correct Answer: (1) Border movement refers to the movement of the mandible, and neutral zone refers to the position where muscles have equal force.

Solution:

Border movement refers to the range of movement of the mandible during chewing or speech, while the neutral zone is the region in the oral cavity where the forces of the lips and cheeks balance the forces of the tongue. This is important for recording accurate muscle positions when constructing prostheses or dentures.

Quick Tip

When recording muscle positions for dentures, focus on the balance between opposing muscle forces in the neutral zone to ensure comfort and function.

11. Which organisms are involved in ANUG (Acute Necrotizing Ulcerative Gingivitis)?

(1) *Treponema denticola*, *Prevotella intermedia*, *Fusobacterium nucleatum*

(2) *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Candida albicans*

(3) *Escherichia coli*, *Pseudomonas aeruginosa*, *Streptococcus mutans*

(4) *Actinomyces israelii*, *Lactobacillus acidophilus*, *Helicobacter pylori*

Correct Answer: (1) *Treponema denticola*, *Prevotella intermedia*, *Fusobacterium nucleatum*

Solution:

The organisms most commonly involved in ANUG (Acute Necrotizing Ulcerative Gingivitis) include **Treponema denticola**, **Prevotella intermedia**, and **Fusobacterium nucleatum**. These bacteria are part of the complex microbial community responsible for the condition, which is characterized by severe gum pain, bleeding, and ulceration.

Quick Tip

When diagnosing ANUG, focus on the presence of anaerobic bacteria in the affected areas, which are key contributors to this disease.

12. Given the mean and standard deviation value, how is the standard error calculated?

- (1) Standard error = Standard deviation / square root of sample size
- (2) Standard error = Mean / sample size
- (3) Standard error = Standard deviation * sample size
- (4) Standard error = Standard deviation / sample size

Correct Answer: (1) Standard error = Standard deviation / square root of sample size

Solution:

The standard error is calculated using the formula:

$$SE = \frac{\sigma}{\sqrt{n}}$$

where σ is the standard deviation and n is the sample size. The standard error represents the variability of the sample mean and gives an estimate of how much the sample mean is expected to vary from the true population mean.

Quick Tip

When calculating standard error, remember that the sample size plays a crucial role in reducing variability in the sample mean.

13. Which precancerous lesions were identified in 2005 by the WHO?

- (1) Leukoplakia, Erythroplakia
- (2) Lichen planus, Actinic keratosis
- (3) Oral submucous fibrosis, Candidiasis
- (4) Basal cell carcinoma, Squamous cell carcinoma

Correct Answer: (1) Leukoplakia, Erythroplakia

Solution:

In 2005, the WHO identified *Leukoplakia* and *Erythroplakia* as precancerous lesions. These lesions are characterized by abnormal tissue growth in the oral cavity, and they have a higher risk of developing into oral cancer, particularly squamous cell carcinoma. Regular monitoring is recommended for individuals with these conditions.

Quick Tip

When studying precancerous lesions, focus on identifying white and red patches in the oral cavity, which could indicate conditions like leukoplakia or erythroplakia.

14. What is the best treatment option for an avulsion that happened 10 minutes ago?

- (1) Immediate reimplantation of the tooth
- (2) Use of an ice pack and waiting for dental intervention
- (3) Preservation in milk and reimplantation
- (4) No treatment necessary

Correct Answer: (1) Immediate reimplantation of the tooth

Solution:

The best treatment option for an avulsion that happened 10 minutes ago is immediate reimplantation of the tooth. This should be done as soon as possible to ensure the best chance for tooth survival. If reimplantation is not possible, the tooth should be kept in a storage medium like milk or a saline solution until a dentist can reimplant it.

Quick Tip

When dealing with dental avulsions, always aim for immediate reimplantation. If not possible, preserve the tooth in a suitable medium for transport.

15. Unilateral cleft lip occurs due to?

- (1) Genetic factors
- (2) Environmental factors
- (3) Both genetic and environmental factors
- (4) Nutritional deficiency

Correct Answer: (3) Both genetic and environmental factors

Solution:

Unilateral cleft lip is typically caused by a combination of genetic predisposition and environmental factors during fetal development. Genetic mutations and maternal factors

such as smoking, alcohol use, or medication during pregnancy can contribute to the development of cleft lip.

Quick Tip

When studying congenital defects, remember that they are often the result of both genetic and environmental factors, especially in the case of cleft lip and palate.

16. If anterior teeth are periodontally compromised, what is the major connector in partial denture construction?

- (1) Lingual bar
- (2) Palatal bar
- (3) Kennedy bar
- (4) Lingual plate

Correct Answer: (4) Lingual plate

Solution:

In cases where anterior teeth are periodontally compromised, a lingual plate is often used as the major connector in partial denture construction. This provides additional support and stabilization for the denture, as it covers the lingual surfaces of the lower teeth and helps distribute the functional forces evenly.

Quick Tip

When constructing partial dentures for compromised teeth, use a lingual plate to provide better support and retention, especially in cases of periodontal involvement.

17. What is the Merin classification?

- (1) Classification of periodontal disease
- (2) Classification of malocclusion
- (3) Classification of fractures
- (4) Classification of cleft lips and palates

Correct Answer: (2) Classification of malocclusion

Solution:

The Merin classification is a system used to classify malocclusions, specifically focusing on the types of occlusal discrepancies in the dental arches. It helps in diagnosing and determining the best course of treatment for patients with occlusal problems.

Quick Tip

When studying malocclusions, be familiar with the classification systems like Merin that help guide treatment decisions for optimal dental alignment.

18. What is the dose of adrenaline in Angina Pectoris?

- (1) 1 mg
- (2) 0.5 mg
- (3) 0.3 mg
- (4) 0.2 mg

Correct Answer: (3) 0.3 mg

Solution:

In the case of Angina Pectoris, adrenaline (epinephrine) is typically administered at a dose of 0.3 mg for emergency relief. This helps in increasing heart rate and improving blood circulation by stimulating the heart's beta receptors. It is important to use adrenaline carefully, as excessive use may lead to adverse effects.

Quick Tip

When administering adrenaline in emergency situations, always be aware of the appropriate dose to avoid complications like arrhythmias.

19. There was an image-based question on Cherubism. What is Cherubism?

- (1) A congenital bone disorder affecting the face
- (2) A type of cranial deformity due to birth trauma
- (3) A rare soft tissue disorder of the mouth
- (4) A vascular malformation in the skull

Correct Answer: (1) A congenital bone disorder affecting the face

Solution:

Cherubism is a rare, genetic bone disorder that causes abnormal growth of the jawbones, leading to characteristic facial deformities. It typically affects children and is associated with the formation of cysts in the jaw, which can result in a "cherubic" appearance due to the swelling of the cheeks and jaw.

Quick Tip

When studying rare genetic disorders like Cherubism, focus on its typical presentation and early diagnosis to manage the condition effectively.

20. Which drug is given in ACLS (Advanced Cardiac Life Support) for Ventricular Tachycardia?

- (1) Amiodarone
- (2) Atropine
- (3) Adrenaline
- (4) Lidocaine

Correct Answer: (1) Amiodarone

Solution:

Amiodarone is commonly used in ACLS for the management of ventricular tachycardia, particularly in cases where the tachycardia is symptomatic or unstable. It works by stabilizing the heart's electrical activity and restoring normal rhythm. Other drugs, such as lidocaine, may also be used depending on the situation.

Quick Tip

When managing ventricular tachycardia in ACLS, focus on appropriate drug administration and timing to restore stable cardiac rhythm.

21. A girl was having a problem with her eye. She could not see the whiteboard from a distance but she could see the textbook. What is it?

- (1) Hypermetropia
- (2) Myopia
- (3) Astigmatism
- (4) Presbyopia

Correct Answer: (2) Myopia

Solution:

The condition described is known as myopia, or nearsightedness. In myopia, a person can see objects close to them clearly (like a textbook) but has difficulty seeing distant objects (like a whiteboard) due to the light entering the eye being focused in front of the retina.

Quick Tip

When diagnosing visual impairments like myopia, consider the symptoms of blurred distance vision and recommend corrective lenses or refractive surgery.

22. What is the level of the Thyroid Cartilage?

- (1) C4
- (2) C5
- (3) C6
- (4) C3

Correct Answer: (1) C4

Solution:

The thyroid cartilage is located at the level of the C4 vertebra. This cartilage is part of the larynx and forms the prominent "Adam's apple" seen in the human neck. It plays a key role in protecting the vocal cords.

Quick Tip

When studying the anatomy of the larynx, remember that the thyroid cartilage is at the level of C4, important for identifying structures in neck anatomy.

23. What is the antidote for Morphine?

- (1) Naloxone
- (2) Flumazenil
- (3) Atropine
- (4) Protamine

Correct Answer: (1) Naloxone

Solution:

Naloxone is the antidote for morphine overdose. It is an opioid antagonist that can rapidly reverse the effects of opioid toxicity, such as respiratory depression, caused by drugs like morphine. Naloxone works by displacing opioids from their receptors in the brain.

Quick Tip

In cases of opioid overdose, prompt administration of naloxone can be life-saving by reversing respiratory depression and restoring normal breathing.

24. Wallerian degeneration is seen in?

- (1) Peripheral nervous system
- (2) Central nervous system
- (3) Muscular system
- (4) Endocrine system

Correct Answer: (1) Peripheral nervous system

Solution:

Wallerian degeneration is a process that occurs in the peripheral nervous system following injury to a nerve. It involves the degeneration of the axon and myelin sheath distal to the injury site. This process is seen in conditions such as nerve trauma, where the nerve is severed or damaged.

Quick Tip

When studying nerve injury, focus on how Wallerian degeneration helps in understanding the recovery and repair process in peripheral nerves.

25. A patient came with painless swelling on the posterior jaw. On aspiration, only a drop of blood is obtained. What is the likely diagnosis?

- (1) Hemangioma
- (2) Odontogenic cyst
- (3) Aneurysmal bone cyst
- (4) Malignant tumor

Correct Answer: (3) Aneurysmal bone cyst

Solution:

An aneurysmal bone cyst typically presents as a painless swelling, and on aspiration, a drop of blood is often obtained due to the cyst's vascular nature. These cysts are benign and consist of blood-filled spaces. They are commonly found in the jaw and other bones.

Quick Tip

When evaluating a jaw swelling, consider the vascular nature of conditions like aneurysmal bone cysts, which can be diagnosed based on aspiration findings.

26. What is the characteristic feature of Wispy Septa?

- (1) Radiographic appearance in cystic lesions
- (2) Thickening of the bony cortex
- (3) Presence of calcifications
- (4) Bony spicules radiating from the lesion

Correct Answer: (1) Radiographic appearance in cystic lesions

Solution:

Wispy septa are seen on radiographs of cystic lesions, particularly odontogenic cysts. These septa appear as fine, delicate lines within the lesion and are often associated with benign cystic growths like odontogenic keratocysts.

Quick Tip

When studying radiographs, look for wispy septa as a characteristic feature in certain types of cystic lesions, particularly odontogenic cysts.

27. Gas gangrene is caused by?

- (1) Clostridium perfringens
- (2) Staphylococcus aureus
- (3) Escherichia coli
- (4) Pseudomonas aeruginosa

Correct Answer: (1) Clostridium perfringens

Solution:

Gas gangrene is caused by *Clostridium perfringens*, a bacterium that produces gas within tissues, leading to tissue necrosis. It typically occurs after trauma or surgery, especially in poorly oxygenated tissues, and can progress rapidly, making it a medical emergency.

Quick Tip

When studying infections, remember that gas gangrene is a life-threatening condition caused by *Clostridium perfringens*, often requiring immediate surgical intervention.

28. Which fungi is commonly associated with urinary tract infections in catheterized patients?

- (1) Candida albicans
- (2) Aspergillus fumigatus
- (3) Cryptococcus neoformans
- (4) Histoplasma capsulatum

Correct Answer: (1) Candida albicans

Solution:

Candida albicans is the most common fungus responsible for urinary tract infections (UTIs) in catheterized patients. The use of urinary catheters increases the risk of fungal infections due to the introduction of bacteria or fungi into the urinary tract.

Quick Tip

When managing catheterized patients, remember that *Candida albicans* is a common cause of UTIs, and consider antifungal treatment if suspected.

29. What is the National Pathfinder Survey related to?

- (1) Educational achievement in the United States
- (2) Nutritional habits of adolescents
- (3) Global health initiatives
- (4) Environmental conservation efforts

Correct Answer: (1) Educational achievement in the United States

Solution:

The National Pathfinder Survey was a large-scale study conducted to assess educational achievement and other factors influencing student success in the United States. It provided valuable data on educational disparities, student performance, and resource allocation.

Quick Tip

When reviewing educational surveys, focus on the results that highlight areas of improvement or disparities in student achievement.

30. What is the type of Ameloblastoma?

- (1) Unicystic
- (2) Multicystic
- (3) Peripheral
- (4) All of the above

Correct Answer: (4) All of the above

Solution:

Ameloblastoma can be classified into three main types: unicystic, multicystic, and peripheral. The unicystic form is limited to a single cyst-like lesion, the multicystic form involves multiple cysts or a solid mass, and the peripheral form occurs in the soft tissue

overlying the jaw.

Quick Tip

When studying ameloblastoma, recognize the different forms (unicystic, multicystic, peripheral) and their unique characteristics in terms of clinical presentation and treatment.

31. What is the treatment for Mandibular Angle Fracture?

- (1) Open reduction and internal fixation (ORIF)
- (2) Closed reduction with wiring
- (3) Conservative management
- (4) No treatment required

Correct Answer: (1) Open reduction and internal fixation (ORIF)

Solution:

The treatment for mandibular angle fractures typically involves open reduction and internal fixation (ORIF), especially if the fracture is displaced or unstable. This allows for proper alignment and stabilization of the fractured bone. Closed reduction may be considered in some cases of non-displaced fractures.

Quick Tip

For mandibular fractures, the treatment plan should be based on the fracture's displacement, stability, and associated complications.

32. Costochondral graft to a child aged 8 years after treatment: why does the mouth deviate to the unoperated site while opening?

- (1) Unilateral condylar growth
- (2) Malposition of the graft
- (3) Neuromuscular imbalance
- (4) Abnormal growth of the temporomandibular joint

Correct Answer: (1) Unilateral condylar growth

Solution:

After a costochondral graft is placed in a growing child, asymmetrical growth of the condyle can occur, leading to deviation of the mouth towards the unoperated side. The condylar growth on the grafted side may not match the natural growth on the unoperated side, resulting in a functional deviation.

Quick Tip

When performing costochondral grafts in children, closely monitor the growth of the condyle to prevent asymmetric jaw movements and functional deviations.

33. What is Stellate granuloma?

- (1) A type of benign skin tumor
- (2) A granulomatous lesion in the oral cavity
- (3) A form of infectious granuloma
- (4) A non-neoplastic lesion affecting the bones

Correct Answer: (2) A granulomatous lesion in the oral cavity

Solution:

Stellate granuloma is a rare, non-specific granulomatous lesion typically found in the oral cavity. It is characterized by stellate (star-shaped) histological features and is considered a benign lesion, often associated with inflammation or foreign body reaction.

Quick Tip

When diagnosing granulomatous lesions, examine the histological features, such as the stellate pattern, which can help identify conditions like stellate granuloma.

34. What is the role of retention after orthodontic movement?

- (1) To maintain tooth position after active treatment
- (2) To prevent relapse of tooth movement
- (3) To improve facial aesthetics
- (4) To reduce pain after treatment

Correct Answer: (2) To prevent relapse of tooth movement

Solution:

Retention after orthodontic treatment is crucial to prevent relapse of the teeth into their original positions. After active orthodontic movement, the teeth need time to stabilize in their new positions as the surrounding bone and soft tissues adapt to the changes. Retainers are used to maintain the teeth in the desired position during this period.

Quick Tip

Always ensure the patient wears their retainer as instructed to avoid relapse of orthodontic treatment and maintain the results long-term.

35. What is the stochastic effect of radiographs?

- (1) Cancer and genetic mutations due to radiation exposure
- (2) Immediate tissue damage from radiation
- (3) Loss of tooth enamel due to repeated exposure
- (4) Long-term bone density loss

Correct Answer: (1) Cancer and genetic mutations due to radiation exposure

Solution:

The stochastic effects of radiation exposure, such as from radiographs, refer to the random occurrence of cancer and genetic mutations, which increase in probability with the amount of exposure. These effects have no threshold, meaning that even small doses of radiation can contribute to the risk of cancer or genetic damage.

Quick Tip

When working with radiographs, minimize radiation exposure and use protective measures to reduce the risk of stochastic effects like cancer.

36. Ductility test is not relevant for?

- (1) Metals
- (2) Polymers

- (3) Glasses
- (4) Ceramics

Correct Answer: (4) Ceramics

Solution:

Ductility tests are generally not relevant for ceramics as they are typically brittle materials that do not undergo significant plastic deformation before fracture. Ductility is more applicable to metals and polymers, which can undergo considerable stretching or elongation before breaking.

Quick Tip

When studying materials, remember that ductility is a key property for metals and polymers but not for brittle materials like ceramics.

37. There was a question related to Dentigerous cyst. What is it?

- (1) A cyst associated with the crown of an unerupted tooth
- (2) A cyst that occurs in the alveolar bone
- (3) A cyst caused by impacted wisdom teeth
- (4) A cyst in the soft tissue surrounding the tooth

Correct Answer: (1) A cyst associated with the crown of an unerupted tooth

Solution:

A dentigerous cyst is a type of odontogenic cyst that is associated with the crown of an unerupted or impacted tooth, most commonly the third molar. It surrounds the crown and is usually diagnosed radiographically. It is often benign but requires surgical removal.

Quick Tip

When diagnosing odontogenic cysts, be aware that dentigerous cysts are often associated with impacted teeth and require careful radiographic evaluation.

38. What is the tooth shedding sequence in primary teeth?

- (1) Incisors, molars, canines

- (2) Molars, incisors, canines
- (3) Canines, incisors, molars
- (4) Molars, canines, incisors

Correct Answer: (2) Molars, incisors, canines

Solution:

The shedding sequence of primary teeth typically starts with the molars, followed by the incisors, and finally the canines. This sequence helps in the proper eruption of permanent teeth as the primary teeth are lost in a coordinated manner.

Quick Tip

When studying tooth eruption and shedding, keep in mind that molars are usually the first primary teeth to be shed, followed by incisors and canines.

39. What is the HIV prophylaxis?

- (1) Antiretroviral therapy (ART)
- (2) Zidovudine
- (3) Post-exposure prophylaxis (PEP)
- (4) Combination of antiretroviral drugs

Correct Answer: (3) Post-exposure prophylaxis (PEP)

Solution:

Post-exposure prophylaxis (PEP) is the treatment given to prevent HIV infection after a potential exposure, such as a needlestick injury or unprotected sexual contact with an HIV-positive individual. It involves a combination of antiretroviral drugs and should be started within 72 hours of exposure for maximum effectiveness.

Quick Tip

When considering HIV prophylaxis, remember that PEP should be initiated as soon as possible after exposure to reduce the risk of HIV transmission.

40. Which drug is used to relax muscles in maxillofacial surgery?

- (1) Midazolam
- (2) Propofol
- (3) Succinylcholine
- (4) Ketamine

Correct Answer: (3) Succinylcholine

Solution:

Succinylcholine is a depolarizing muscle relaxant commonly used in maxillofacial surgery to induce muscle relaxation during intubation and surgical procedures. It acts by binding to acetylcholine receptors at the neuromuscular junction, leading to muscle paralysis for a short duration.

Quick Tip

When managing anesthesia in maxillofacial surgery, ensure proper dosing of muscle relaxants like succinylcholine to avoid complications.

41. There was a question related to Shrugging off the Shoulder in Neck Surgery. What is it related to?

- (1) Accessory nerve damage
- (2) Spinal cord injury
- (3) Shoulder dislocation
- (4) Thoracic outlet syndrome

Correct Answer: (1) Accessory nerve damage

Solution:

Shrugging off the shoulder during neck surgery is often related to accessory nerve (cranial nerve XI) damage. This nerve innervates the trapezius muscle, which is responsible for shoulder shrugging. Damage to this nerve during surgery can result in weakness or paralysis of the trapezius muscle, leading to the inability to shrug the shoulder.

Quick Tip

When performing neck surgeries, be cautious of the accessory nerve to prevent postoperative shoulder dysfunction.

42. What are nosocomial infections in a hospital setting?

- (1) Infections acquired from hospital staff
- (2) Infections acquired during hospital stay
- (3) Infections acquired from visitors
- (4) Infections acquired during surgery only

Correct Answer: (2) Infections acquired during hospital stay

Solution:

Nosocomial infections, also known as hospital-acquired infections (HAIs), are infections that patients acquire during their stay in a hospital or healthcare facility. These infections can occur due to exposure to pathogens in the hospital environment and can affect various body systems.

Quick Tip

To reduce nosocomial infections, emphasize hygiene, proper sterilization techniques, and strict infection control protocols in hospital settings.

43. Which type of implant has the root piece intact?

- (1) Endosteal implant
- (2) Subperiosteal implant
- (3) Transosteal implant
- (4) Root-form implant

Correct Answer: (4) Root-form implant

Solution:

Root-form implants are designed to resemble the natural root of a tooth and are inserted into the jawbone. These implants have the root piece intact and are typically used in cases where

the natural tooth root is missing or damaged.

Quick Tip

When studying implant types, focus on the root-form design as it closely mimics the natural structure of teeth and provides superior stability.

44. What is the recommended area for biopsy from ulcers?

- (1) The margin of the ulcer
- (2) The center of the ulcer
- (3) The surrounding normal tissue
- (4) The deepest part of the ulcer

Correct Answer: (1) The margin of the ulcer

Solution:

When performing a biopsy on an ulcer, it is recommended to take the sample from the margin of the ulcer, as this area contains both normal and abnormal tissue, providing more diagnostic information. The center of the ulcer may only contain necrotic tissue, which is less informative for diagnosis.

Quick Tip

For accurate diagnosis, always biopsy the margin of the ulcer where both healthy and diseased tissues meet.

45. Which drug is used for asthma during extraction?

- (1) Albuterol
- (2) Adrenaline
- (3) Atropine
- (4) Hydrocortisone

Correct Answer: (1) Albuterol

Solution:

Albuterol is a bronchodilator commonly used in the treatment of asthma, particularly during

dental procedures such as extractions. It helps to relieve bronchospasm and open the airways, ensuring the patient can breathe comfortably during the procedure.

Quick Tip

When managing asthmatic patients during dental extractions, always have a bronchodilator like albuterol on hand to prevent airway obstruction.

46. What is the most ethical way to study bone growth?

- (1) Animal experiments
- (2) In vitro studies
- (3) Human clinical studies
- (4) Radiographic analysis

Correct Answer: (1) Animal experiments

Solution:

The most ethical way to study bone growth involves the use of animal experiments, where ethical guidelines and proper care are followed. While human clinical studies provide valuable information, ethical constraints prevent direct studies on growing human bones without justified medical purposes. Animal models offer a more controlled and humane way to investigate bone development.

Quick Tip

When conducting research on bone growth, consider ethical considerations and opt for animal studies when appropriate and when human subjects are not involved.

47. Which tumor shows resistance to radiation?

- (1) Osteosarcoma
- (2) Glioblastoma
- (3) Squamous cell carcinoma
- (4) Melanoma

Correct Answer: (2) Glioblastoma

Solution:

Glioblastoma is a highly aggressive and malignant tumor that shows significant resistance to radiation therapy. Despite receiving radiotherapy, the prognosis remains poor due to the tumor's rapid growth and its ability to repair DNA damage caused by radiation.

Quick Tip

When dealing with glioblastomas, be aware of their resistance to radiation and consider alternative therapies such as chemotherapy or immunotherapy.

48. What is the prenatal period in the human embryological period?

- (1) First 2 weeks
- (2) 3rd to 8th week
- (3) 9th week to birth
- (4) 5th month to birth

Correct Answer: (3) 9th week to birth

Solution:

The prenatal period in human embryology refers to the time from the 9th week of gestation until birth. During this period, the embryo develops into a fetus, with continued growth and maturation of tissues, organs, and systems. This phase is crucial for the overall development and preparation for birth.

Quick Tip

When studying human development, remember that the prenatal period includes the fetal stage, which spans from the 9th week to birth, and is critical for organ and tissue development.

49. What is the best fluoride-releasing agent?

- (1) Sodium fluoride
- (2) Stannous fluoride
- (3) Calcium fluoride

(4) Silver diamine fluoride

Correct Answer: (3) Calcium fluoride

Solution:

Calcium fluoride is considered the best fluoride-releasing agent due to its ability to remineralize enamel effectively. It forms a stable compound on the tooth surface and slowly releases fluoride over time, helping to prevent dental caries and strengthen the enamel.

Quick Tip

When using fluoride-releasing agents, calcium fluoride is highly effective for long-term remineralization and enamel protection against decay.