

NEET MDS 2023 Question Paper with Solutions

Time Allowed :3 Hours 20 minutes	Maximum Marks :720	Total Questions :240
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General Instructions

1. The NEET MDS Exam will be structured with a total of 720 marks.
2. The total duration of the exam is 3 Hours 20 Minutes.
3. 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
4. Each section will contain multiple-choice questions (MCQs) with four options.
5. Negative marking will apply for incorrect answers. For each incorrect answer, 1 mark will be deducted.
6. Ensure that you read each question carefully before answering.
7. No electronic devices, including calculators or mobile phones, are allowed inside the examination hall.
8. Candidates must carry their Admit Cards and valid ID proof to the examination

1. Thermal Energy needed to convert solid to liquid

- (A) Melting point
- (B) Sublimation heat
- (C) Heat of fusion
- (D) Latent heat

Correct Answer: (C) Heat of fusion

Solution:

The process of converting a substance from the solid state to the liquid state is known as fusion or melting.

The thermal energy required for this specific phase change (solid to liquid) at a constant temperature is defined as the Heat of fusion.

Latent heat (D) is the general term for phase change energy, but Heat of fusion (C) is the specific term required by the question.

💡 Quick Tip

Melting point is the temperature, not the energy. Sublimation heat is for the solid-to-gas transition. Heat of fusion is the specific thermal energy required for melting.

2. What would you use control systemically in a bleeding extraction tooth case?

- (A) Ethamsylate
- (B) 1 percent adrenaline
- (C) Gelatin foam
- (D) Cellulose

Correct Answer: (A) Ethamsylate

Solution:

The question asks for a systemic medication, meaning one that affects the body's overall clotting mechanism, usually administered orally or intravenously.

Options (B), (C), and (D) (Adrenaline, Gelatin foam, Oxidized Cellulose) are all topical or local hemostatic agents applied directly to the bleeding site.

Ethamsylate (A) is an antifibrinolytic and capillary-stabilizing drug administered systemically to achieve hemostasis.

Therefore, Ethamsylate is the correct systemic option.

💡 Quick Tip

Systemic hemostatic drugs (Ethamsylate, Tranexamic acid) are essential for managing patients with generalized bleeding tendencies or when local measures fail.

3. Penicillamine is an antidote for

- (A) Lead poisoning
- (B) Arsenic poisoning
- (C) Mercury poisoning
- (D) Copper poisoning

Correct Answer: (D) Copper poisoning

Solution:

Penicillamine is a potent chelating agent.

It works by binding to heavy metals, facilitating their excretion.

Its primary and classic use is in treating Wilson's disease, a genetic disorder characterized by toxic accumulation of copper.

Therefore, Penicillamine acts as an antidote for chronic Copper poisoning.

💡 Quick Tip

Remember the classic chelation associations: Penicillamine ($\rightarrow$ Copper), Dimercaprol ($\rightarrow$ Arsenic/Mercury/Gold), EDTA ($\rightarrow$ Lead).

4. Dog bell and food story

- (A) Rabies
- (B) Parvovirus
- (C) Tetanus
- (D) Leptospirosis

Correct Answer: (A) Rabies

Solution:

The phrase "Dog bell and food story" refers to Ivan Pavlov's classical conditioning experiments, a concept in Physiology and Psychology.

The options provided are all infectious diseases, making the logical connection unclear.

Assuming the intent is to select a severe neurological or behavioral pathology associated with dogs: Rabies (A) causes profound and characteristic behavioral changes (furious form) that affect how a dog reacts to stimuli.

Given the context of NEET MDS memory questions, Rabies is usually the intended answer when behavioral changes or neurological involvement in dogs are mentioned, despite the weak link to the Pavlov experiment description.

💡 Quick Tip

In flawed questions based on memory recall, identify the core subject (dogs/behavior/disease) and select the most severe/classic pathology related to neurological symptoms (Rabies).

5. Is CBO related to crepitus?

- (A) Yes, CBO is related to crepitus.
- (B) No, CBO is not related to crepitus.
- (C) CBO refers to Chronic Bone Overload.
- (D) CBO is a type of soft tissue injury.

Correct Answer: (C) CBO refers to Chronic Bone Overload.

Solution:

CBO is a standard abbreviation in dentistry, particularly implantology and biomechanics.

CBO stands for Chronic Bone Overload.

Option (C) provides the correct definition of the acronym.

While Chronic Bone Overload may eventually lead to joint issues (like temporomandibular joint disorder) that cause crepitus, the primary fact being tested is the definition of CBO itself.

💡 Quick Tip

When an acronym is presented, the definition (C) is often the most direct and accurate answer compared to clinical assertions (A, B, D).

6. Sunflower cataract and Kayser-Fleischer rings occur due to

- (A) Wilson's disease
- (B) Diabetes mellitus
- (C) Glaucoma
- (D) Hyperthyroidism

Correct Answer: (A) Wilson's disease

Solution:

Wilson's disease is an autosomal recessive disorder leading to excessive copper accumulation in the body due to impaired biliary excretion.

Kayser-Fleischer (K-F) rings are corneal deposits of copper.

Sunflower cataracts are also a characteristic finding resulting from copper deposition in the lens capsule.

Both are pathognomonic ocular signs of Wilson's disease (A).

💡 Quick Tip

Memorize classic triad findings: K-F rings and Sunflower cataracts are key indicators of copper toxicity in Wilson's disease.

7. Drug of choice for absence seizures

- (A) Phenytoin
- (B) Carbamazepine
- (C) Valproate
- (D) Levetiracetam

Correct Answer: (C) Valproate

Solution:

Absence seizures are generalized, non-convulsive seizures.

Ethosuximide is traditionally the most specific drug of choice for pure absence seizures.

However, Valproate (Valproic acid) (C) is highly effective for absence seizures and is the preferred drug if the patient also experiences other forms of generalized seizures (like tonic-clonic), making it a common choice for mixed seizures including absence.

Phenytoin and Carbamazepine are ineffective against absence seizures.

💡 Quick Tip

Ethosuximide is specific for absence seizures. Valproate is effective for both absence and generalized tonic-clonic seizures, often making it the preferred broader-spectrum choice.

8. What is the health scheme for non-communicable diseases?

- (A) Ayushman Bharat
- (B) National Health Mission
- (C) Rashtriya Swasthya Bima Yojana
- (D) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

Correct Answer: (D) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

Solution:

The National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Dis-

eases and Stroke (NPCDCS) is the scheme specifically dedicated to tackling NCDs in India.

Ayushman Bharat (A) is a national insurance scheme covering treatment generally.

The NPCDCS (D) explicitly lists the four major NCDs and focuses on their prevention and control.

 Quick Tip

Know the mandates of key public health schemes. The name NPCDCS directly matches the disease category (NCDs) mentioned in the question.

9. What is alginate filler derived from?

- (A) Seaweed
- (B) Starch
- (C) Rubber
- (D) Cellulose

Correct Answer: (A) Seaweed

Solution:

Alginate impression material is an irreversible hydrocolloid derived from alginic acid.

Alginic acid is a polysaccharide extracted from the cell walls of brown algae, commonly known as seaweed.

While the actual filler is usually diatomaceous earth, the principal reactive component (alginate) originates from seaweed (A).

 Quick Tip

The chemical basis of Alginate (alginic acid) is derived from brown algae (seaweed). Do not confuse the filler (diatomaceous earth) with the source of the main setting ingredient.

10. Chlorides not used for disinfection in which impression material?

- (A) Alginate
- (B) Silicone
- (C) Hydrocolloid
- (D) Plaster

Correct Answer: (D) Plaster

Solution:

Immersion disinfection, particularly using aqueous solutions like hypochlorites (chlorides), is effective for Alginate, Silicone, and other Hydrocolloids.

However, Plaster of Paris (Gypsum) impressions (D) are highly sensitive to water uptake.

Immersion in aqueous solutions leads to dimensional instability, surface roughening, and loss of detail, making wet disinfection methods like chloride immersion unsuitable.

💡 Quick Tip

Materials that are dimensionally sensitive to water (Plaster, ZOE) require spray disinfection or are disinfected by other means, whereas elastomers and hydrocolloids tolerate short immersion.

11. What would you use control systematically based on the memory of students?

- (A) Ethamsylate
- (B) 1 percent adrenaline
- (C) Gelatin foam
- (D) Cellulose

Correct Answer: (A) Ethamsylate

Solution:

This is a repeated question (same as Q2).

We must select the systemic agent for bleeding control.

Ethamsylate is the systemic option.

💡 Quick Tip

Repetition of questions indicates a high-yield fact. Systemic control of bleeding often involves Ethamsylate or Tranexamic acid.

12. Thermal energy needed to convert solid to liquid?

- (A) Melting point
- (B) Sublimation heat
- (C) Heat of fusion

(D) Latent heat

Correct Answer: (C) Heat of fusion

Solution:

This is a repeated question (same as Q1).

The energy required to change phase from solid to liquid is the Heat of fusion.

 Quick Tip

Fusion = Melting. Heat of Fusion = Energy needed for melting.

13. Stage of change where the person is thinking of changing?

(A) Precontemplation

(B) Contemplation

(C) Preparation

(D) Action

Correct Answer: (B) Contemplation

Solution:

This question relates to the Transtheoretical Model (TTM).

Contemplation (B) is the stage where the individual is thinking about change and recognizes the problem, usually intending to act within the next six months.

Precontemplation (A) means the individual is unaware or unwilling to change.

Preparation (C) involves making concrete plans and intending to act immediately (e.g., next month).

 Quick Tip

Contemplation is defined by awareness and ambivalence; Preparation is defined by commitment and planning.

14. Chlorides not used for disinfection in which impression material?

(A) Alginate

(B) Silicone

(C) Hydrocolloid

(D) Plaster

Correct Answer: (D) Plaster

Solution:

This is a repeated question (same as Q10).

Plaster of Paris (D) is sensitive to immersion disinfection due to high water absorbency and resulting dimensional change.

💡 Quick Tip

Plaster is dimensionally unstable when immersed in aqueous disinfection solutions like chlorides.

15. What is alginate filler derived from?

(A) Seaweed

(B) Starch

(C) Rubber

(D) Cellulose

Correct Answer: (A) Seaweed

Solution:

This is a repeated question (same as Q9).

The principal component, alginic acid, is derived from brown algae (seaweed).

💡 Quick Tip

Know the sources of key dental materials: Alginate from Seaweed, Gypsum from mineral sources, etc.

16. Highest level of analysis

(A) Descriptive analysis

(B) Inferential analysis

(C) Predictive analysis

(D) Prescriptive analysis

Correct Answer: (D) Prescriptive analysis

Solution:

Data analytics typically follows a hierarchy based on complexity and value provided.

Descriptive (A) answers "What happened?"

Predictive (C) answers "What will happen?"

Prescriptive (D) answers "What should we do?" (Actionable recommendations).

Prescriptive analysis, which uses optimization and simulation to recommend the best outcome, is considered the highest level of analysis.

💡 Quick Tip

Prescriptive is the highest level because it dictates optimal future actions, leveraging insights from descriptive, diagnostic, and predictive stages.

17. Stage of change where the person is thinking of changing?

(A) Precontemplation

(B) Contemplation

(C) Preparation

(D) Action

Correct Answer: (B) Contemplation

Solution:

This is a repeated question (same as Q13).

The stage where an individual is mentally assessing the pros and cons of changing behavior is the Contemplation stage.

💡 Quick Tip

Contemplation is marked by internal dialogue and considering change, usually within a 6-month horizon.

18. Enamel is done when enamel is involved.

(A) Caries treatment

(B) Cosmetic bonding

- (C) Enameloplasty
- (D) Fluoride treatment

Correct Answer: (C) Enameloplasty

Solution:

The term Enameloplasty refers to the reshaping or modification of the enamel surface for aesthetic or functional purposes.

It is a procedure specifically limited to the enamel layer.

Caries treatment and cosmetic bonding often involve dentin or restorative materials, while fluoride treatment is chemical, not mechanical reshaping.

💡 Quick Tip

Enameloplasty is a minimal, irreversible procedure focusing solely on the external contour of the enamel surface.

19. A bar graph with different parts of the same pieces is

- (A) Histogram
- (B) Stacked bar graph
- (C) Pareto chart
- (D) Line graph

Correct Answer: (B) Stacked bar graph

Solution:

A stacked bar graph (B) is used to display data where categories (the "different parts") are components of a whole ("the same piece" or total bar length).

Each segment of the bar represents a proportional contribution to the total value.

Histograms and Line graphs serve different purposes (continuous data distribution and time trends, respectively).

💡 Quick Tip

Stacked bar graphs and 100% stacked bar graphs are ideal for visualizing part-to-whole relationships in categorical data.

20. What is the health scheme for non-communicable diseases?

- (A) Ayushman Bharat
- (B) National Health Mission
- (C) Rashtriya Swasthya Bima Yojana
- (D) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

Correct Answer: (D) National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

Solution:

This is a repeated question (same as Q8).

The NPCDCS (D) is the explicitly named national public health program dedicated to managing and preventing the four major non-communicable diseases mentioned.

 Quick Tip

In public health, look for the program whose title directly specifies the target group or condition (NCDs in this case).

21. Doubt blinding reduces which bias?

- (A) Selection bias
- (B) Information bias
- (C) Observer bias
- (D) Recall bias

Correct Answer: (C) Observer bias

Solution:

Blinding (masking) in research is used to prevent knowledge of treatment assignment from influencing results.

Observer bias (also known as performance bias or assessment bias) occurs when the researcher's expectations influence the observation, measurement, or recording of outcomes.

Doubt blinding, often referred to simply as blinding (single or double), makes the person assessing the outcome unaware of which intervention the participant received.

By concealing the assignment, blinding effectively eliminates or reduces Observer bias (C) by ensuring objective assessment.

💡 Quick Tip

Blinding primarily targets observer (measurement) bias and performance bias. Randomization primarily targets selection bias.

22. Key trait explain What?

- (A) Genetic predisposition
- (B) Behavior patterns
- (C) Personality trait
- (D) Environmental influence

Correct Answer: (C) Personality trait

Solution:

In psychology, a 'trait' is defined as a characteristic pattern of behavior, disposition, or feeling that is generally stable over time.

The term "Key trait" (or cardinal trait, central trait) refers to a fundamental characteristic that defines a person's behavior.

In the context of the options provided, (C) Personality trait is the most accurate and encompassing definition of what a "trait" explains, particularly a "key" or defining one.

💡 Quick Tip

In behavioral science, a trait is a relatively consistent, enduring characteristic used to describe an individual's personality or disposition.