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Test Booklet Code : **48**

NEET-UG : 2025

Question with Solution

Date : 04.05.2025

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Test Booklet No.

NARMADA

Test Booklet Code

48

ENGLISH

Do not open this Test Booklet until you are asked to do so.

This Booklet contains 32 pages, including Rough Page.

Important Instructions:

1. The Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars on ORIGINAL Copy carefully with **blue/black** ball point pen only.
2. The test is of **3 hours** duration and the Test Booklet contains **180** multiple-choice questions (four options with a single correct answer) from **Physics, Chemistry and Biology (Botany and Zoology).**
3. Wherever the symbols/constants are not mentioned, they are to be considered as per their standard meaning/ value.
4. Each question carries **4** marks. For each correct response, the candidate will get **4** marks. For each incorrect response, **one mark will be deducted** from the total scores. **The maximum marks are 720.**
5. Use **Blue/Black Ball Point Pen only** for writing particulars on this page/marking responses on Answer Sheet.
6. Rough work is to be done in the space provided for this purpose in the Test Booklet only.
7. On completion of the test, the candidate **must hand over the Answer Sheet (ORIGINAL and OFFICE Copy) to the Invigilator** before leaving the Room/ Hall. The candidates are allowed to take away this Test Booklet with them.
8. **The CODE for this Booklet is "48". Make sure to enter this code in the OMR answer sheet.**
9. The candidates should ensure that the Answer Sheet is not folded. Do not make any stray marks on the Answer Sheet. Do not write your Roll No. anywhere else except in the specified space in the Test Booklet/ Answer Sheet.
10. Use of white fluid for correction is **NOT** permissible on the Answer Sheet.
11. Each candidate must show on-demand his/her Admit Card to the Invigilator.
12. No candidate, without special permission of the centre Superintendent or Invigilator, would leave his/her seat.
13. The candidates should not leave the Examination Hall without handing over their Answer Sheet to the Invigilator on duty and sign (with time) the Attendance Sheet **twice. Cases, where a candidate has not signed the Attendance Sheet second time, will be deemed not to have handed over the Answer Sheet and dealt with as an Unfair Means case.**
14. Use of Electronic/Manual Calculator is prohibited.
15. The candidates are governed by all Rules and Regulations of the examination with regard to their conduct in the Examination Room/Hall. All cases of unfair means will be dealt with as per the Rules and Regulations of this examination along with Public Examinations (Prevention of unfair means act 2024).
16. **No part of the Test Booklet and Answer Sheet shall be detached under any circumstances.**
17. The candidates will write the Correct Test Booklet Code as given in the Test Booklet/Answer Sheet in the Attendance Sheet.
18. If a candidate marks more than one answers for a question in the **OMR Sheet**, it will be treated as incorrect and negative marking will be applicable.

Name of the Candidate (in Capitals) : ....

Roll Number : in figures ....

: in words ....

Centre of Examination (in Capitals) : ....

Candidate's Signature : .... Invigilator's Signature : ....

Facsimile signature stamp of Centre Superintendent : ....

136 Which one of the following statements refers to Reductionist Biology?

(1) Chemical approach to study and understand living organisms.

(2) Behavioural approach to study and understand living organisms.

(3) Physico-chemical approach to study and understand living organisms.

(4) Physiological approach to study and understand living organisms.

137 After maturation, in primary lymphoid organs, the lymphocytes migrate for interaction with antigens to secondary lymphoid organ(s) / tissue(s) like:

A. thymus B. bone marrow
C. spleen D. lymph nodes
E. Peyer's patches

Choose the *correct* answer from the options given below:

(1) E, A, B only
(2) C, D, E only
(3) B, C, D only
(4) A, B, C only

138 Match **List I** with **List II** :

List I	List II
A. The Evil Quartet	I. Cryopreservation
B. Ex situ conservation	II. Alien species invasion
C. *Lantana camara*	III. Causes of biodiversity losses
D. Dodo	IV. Extinction

Choose the option with all correct matches.

(1) A-III, B-IV, C-II, D-I
(2) A-III, B-II, C-IV, D-I
(3) A-III, B-II, C-I, D-IV
(4) A-III, B-I, C-II, D-IV

139 How many meiotic and mitotic divisions need to occur for the development of a mature female gametophyte from the megaspore mother cell in an angiosperm plant?

(1) 1 Meiosis and 3 Mitosis
(2) No Meiosis and 2 Mitosis
(3) 2 Meiosis and 3 Mitosis
(4) 1 Meiosis and 2 Mitosis

140 Which of the following type of immunity is present at the time of birth and is a non-specific type of defence in the human body?

(1) Cell-mediated Immunity
(2) Humoral Immunity
(3) Acquired Immunity
(4) Innate Immunity

141 Given below are two statements :

Statement I : Fig fruit is a non-vegetarian fruit as it has enclosed fig wasps in it.

Statement II : Fig wasp and fig tree exhibit mutual relationship as fig wasp completes its life cycle in fig fruit and fig fruit gets pollinated by fig wasp.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

(1) Statement I is correct but statement II is incorrect
(2) Statement I is incorrect but statement II is correct
(3) Both statement I and statement II are correct
(4) Both statement I and statement II are incorrect

142 Given below are two statements : One is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Cells of the tapetum possess dense cytoplasm and generally have more than one nucleus.

Reason (R) : Presence of more than one nucleus in the tapetum increases the efficiency of nourishing the developing microspore mother cells.

In light of the above statements, choose the **most appropriate** answer from the options given below :

(1) **A** is true but **R** is false
(2) **A** is false but **R** is true
(3) Both **A** and **R** are true and **R** is the correct explanation of **A**
(4) Both **A** and **R** are true but **R** is **NOT** the correct explanation of **A**

143 From the statements given below choose the **correct** option :

A. The eukaryotic ribosomes are 80S and prokaryotic ribosomes are 70S.
B. Each ribosome has two sub-units.
C. The two sub-units of 80S ribosome are 60S and 40S while that of 70S are 50S and 30S.
D. The two sub-units of 80S ribosome are 60S and 20S and that of 70S are 50S and 20S.
E. The two sub-units of 80S are 60S and 30S and that of 70S are 50S and 30S.

(1) A, B, E are true
(2) B, D, E are true
(3) A, B, C are true
(4) A, B, D are true

144 Which one of the following enzymes contains 'Haem' as the prosthetic group?

(1) Succinate dehydrogenase
(2) Catalase
(3) RuBisCo
(4) Carbonic anhydrase

145 What is the name of the blood vessel that carries deoxygenated blood from the body to the heart in a frog ?

(1) Pulmonary vein
(2) Vena cava
(3) Aorta
(4) Pulmonary artery

146 Given below are the stages in the life cycle of pteridophytes. Arrange the following stages in the correct sequence.

A. Prothallus stage
B. Meiosis in spore mother cells
C. Fertilisation
D. Formation of archegonia and antheridia in gametophyte.
E. Transfer of antherozoids to the archegonia in presence of water.

Choose the **correct** answer from the options given below :

(1) D, E, C, A, B (2) E, D, C, B, A
(3) B, A, D, E, C (4) B, A, E, C, D

147 The blue and white selectable markers have been developed which differentiate recombinant colonies from non-recombinant colonies on the basis of their ability to produce colour in the presence of a chromogenic substrate.

Given below are two statements about this method:

Statement I : The blue coloured colonies have DNA insert in the plasmid and they are identified as recombinant colonies.

Statement II : The colonies without blue colour have DNA insert in the plasmid and are identified as recombinant colonies.

In the light of the above statements, choose the **most appropriate** answer from the options given below :

(1) Statement I is correct but Statement II is incorrect
(2) Statement I is incorrect but Statement II is correct
(3) Both Statement I and Statement II are correct
(4) Both Statement I and Statement II are incorrect

148 Which of the following microbes is NOT involved in the preparation of household products?

A. *Aspergillus niger*
B. *Lactobacillus*
C. *Trichoderma polysporum*
D. *Saccharomyces cerevisiae*
E. *Propionibacterium sharmanii*

Choose the **correct** answer from the options given below:

(1) C and D only
(2) C and E only
(3) A and B only
(4) A and C only

149 Silencing of specific mRNA is possible via RNAi because of -

(1) Complementary tRNA
(2) Non-complementary ssRNA
(3) Complementary dsRNA
(4) Inhibitory ssRNA

150 The complex II of mitochondrial electron transport chain is also known as

(1) Cytochrome c oxidase
(2) NADH dehydrogenase
(3) Cytochrome bc1
(4) Succinate dehydrogenase

151 While trying to find out the characteristic of a newly found animal, a researcher did the histology of adult animal and observed a cavity with presence of mesodermal tissue towards the body wall but no mesodermal tissue was observed towards the alimentary canal. What could be the possible coelome of that animal?

(1) Schizocoelomate
(2) Spongocoelomate
(3) Acoelomate
(4) Pseudocoelomate

152 Given below are two statements :

Statement I : In a floral formula ⊕ stands for zygomorphic nature of the flower, and G stands for inferior ovary.

Statement II : In a floral formula ⊕ stands for actinomorphic nature of the flower and G stands for superior ovary.

In the light of the above statements, choose the **correct** answer from the options given below:

(1) Statement I is correct but Statement II is incorrect
(2) Statement I is incorrect but Statement II is correct
(3) Both Statement I and Statement II are correct
(4) Both Statement I and Statement II are incorrect

153 Given below are two statements :

Statement I : In ecosystem, there is unidirectional flow of energy of sun from producers to consumers.

Statement II : Ecosystems are exempted from 2nd law of thermodynamics.

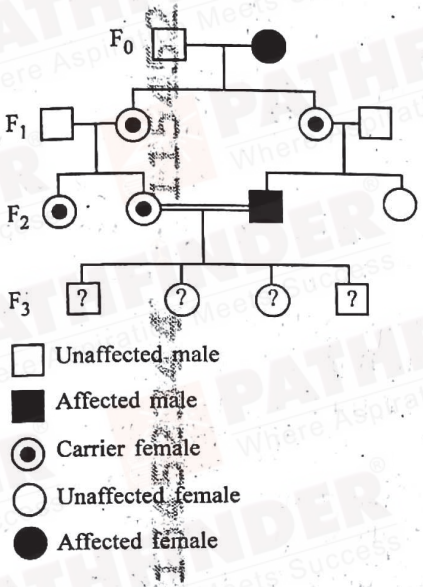
In the light of the above statements, choose the **most appropriate** answer from the options given below :

(1) Statement I is correct but statement II is incorrect
(2) Statement I is incorrect but statement II is correct
(3) Both statement I and statement II are correct
(4) Both statement I and statement II are incorrect

154 Which of the following is the unit of productivity of an Ecosystem?

(1) KCal m^{-3}
(2) (KCal m^{-2})yr^{-1}
(3) gm^{-2}
(4) KCal m^{-2}

155 With the help of given pedigree, find out the probability for the birth of a child having no disease and being a carrier (has the disease mutation in one allele of the gene) in F_3 generation.



(1) 1/8 (2) Zero
(3) 1/4 (4) 1/2

156 In the seeds of cereals the outer covering of endosperm separates the embryo by a protein-rich layer called :
(1) Integument
(2) Aleurone layer
(3) Coleoptile
(4) Coleorhiza

157 Match **List I** with **List II** :

	List I		List II
A.	Chlorophyll a	I.	Yellow-green
B.	Chlorophyll b	II.	Yellow
C.	Xanthophylls	III.	Blue-green
D.	Carotenoids	IV.	Yellow to Yellow-orange

Choose the option with all **correct** matches.
(1) A-I, B-II, C-IV, D-III
(2) A-I, B-IV, C-III, D-II
(3) A-III, B-IV, C-II, D-I
(4) A-III, B-I, C-II, D-IV

158 Who proposed that the genetic code for amino acids should be made up of three nucleotides?
(1) Jacque Monod
(2) Franklin Stahl
(3) George Gamow
(4) Francis Crick

159 Histones are enriched with -
(1) Phenylalanine & Leucine
(2) Phenylalanine & Arginine
(3) Lysine & Arginine
(4) Leucine & Lysine

160 Which of the following enzyme(s) are **NOT** essential for gene cloning?
A. Restriction enzymes
B. DNA ligase
C. DNA mutase
D. DNA recombinase
E. DNA polymerase
Choose the **correct** answer from the options given below :
(1) D and E only
(2) B and C only
(3) C and D only
(4) A and B only

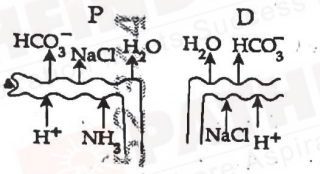
161 A specialised membranous structure in a prokaryotic cell which helps in cell wall formation, DNA replication and respiration is :
(1) Cristae
(2) Endoplasmic Reticulum
(3) Mesosome
(4) Chromatophores

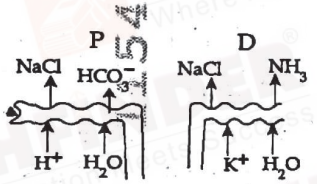
162 Which factor is important for termination of transcription?
(1) ρ (rho) (2) γ (gamma)
(3) α (alpha) (4) σ (sigma)

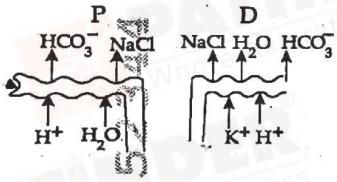
163 Which of the following statement is **correct** about location of the male frog copulatory pad ?

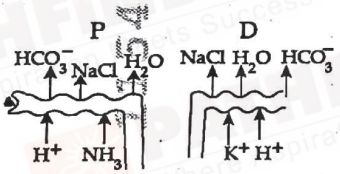
(1) Second digit of fore limb
(2) First digit of the fore limb
(3) First and Second digit of fore limb
(4) First digit of hind limb

164 Which of the following diagrams is correct with regard to the proximal (P) and distal (D) tubule of the Nephron.

(1) 

(2) 

(3) 

(4) 

165 Identify the statement that is **NOT** correct.

(1) Antigen binding site is located at C-terminal region of antibody molecules.
(2) Constant region of heavy and light chains are located at C-terminus of antibody molecules.
(3) Each antibody has two light and two heavy chains.
(4) The heavy and light chains are held together by disulfide bonds.

166 Match **List I** with **List II** :

List I	List II
A. Scutellum	I. Persistent nucellus
B. Non-albuminous seed	II. Cotyledon of Monocot seed
C. Epiblast	III. Groundnut
D. Perisperm	IV. Rudimentary cotyledon

Choose the option with all **correct** matches.

(1) A-IV, B-III, C-I, D-II
(2) A-II, B-IV, C-III, D-I
(3) A-II, B-III, C-IV, D-I
(4) A-IV, B-III, C-II, D-I

167 Find the statement that is **NOT** correct with regard to the structure of monocot stem.

(1) Vascular bundles are conjoint and closed.
(2) Phloem parenchyma is absent.
(3) Hypodermis is parenchymatous.
(4) Vascular bundles are scattered.

168 Twins are born to a family that lives next door to you. The twins are a boy and a girl. Which of the following must be true?

(1) They were conceived through in vitro fertilization.
(2) They have 75% identical genetic content.
(3) They are monozygotic twins.
(4) They are fraternal twins.

169 Sweet potato and potato represent a certain type of evolution. Select the correct combination of terms to explain the evolution.

(1) Homology, convergent
(2) Analogy, divergent
(3) Analogy, convergent
(4) Homology, divergent

170 Which one of the following phytohormones promotes nutrient mobilization which helps in the delay of leaf senescence in plants?
(1) Gibberellin (2) Cytokinin
(3) Ethylene (4) Abscisic acid

171 Why can't insulin be given orally to diabetic patients?
(1) Because of structural variation
(2) Its bioavailability will be increased
(3) Human body will elicit strong immune response
(4) It will be digested in Gastro-Intestinal (GI) tract

172 Name the class of enzyme that usually catalyze the following reaction :

$S - G + S^{\#} \rightarrow S + S^{\#} - G$

Where, G → a group other than hydrogen
S → a substrate
$S^{\#}$ → another substrate

(1) Transferase (2) Ligase
(3) Hydrolase (4) Lyase

173 Given below are two statements :

Statement I : The DNA fragments extracted from gel electrophoresis can be used in construction of recombinant DNA.

Statement II : Smaller size DNA fragments are observed near anode while larger fragments are found near the wells in an agarose gel.

In the light of the above statements, choose the **most appropriate** answer from the options given below :
(1) Statement I is correct but statement II is incorrect
(2) Statement I is incorrect but statement II is correct
(3) Both statement I and statement II are correct
(4) Both statement I and statement II are incorrect

174 The correct sequence of events in the life cycle of bryophytes is
A. Fusion of antherozoid with egg.
B. Attachment of gametophyte to substratum.
C. Reduction division to produce haploid spores.
D. Formation of sporophyte.
E. Release of antherozoids into water.
Choose the **correct** answer from the options given below :
(1) B, E, A, D, C
(2) D, E, A, B, C
(3) D, E, A, C, B
(4) B, E, A, C, D

175 Genes R and Y follow independent assortment. If RRYY produce round yellow seeds and rryy produce wrinkled green seeds, what will be the phenotypic ratio of the F2 generation?
(1) Phenotypic ratio - 9 : 3 : 3 : 1
(2) Phenotypic ratio - 9 : 7
(3) Phenotypic ratio - 1 : 2 : 1
(4) Phenotypic ratio - 3 : 1

176 Each of the following characteristics represent a Kingdom proposed by Whittaker. Arrange the following in increasing order of complexity of body organization.
A. Multicellular heterotrophs with cell wall made of chitin.
B. Heterotrophs with tissue/organ/organ system level of body organization.
C. Prokaryotes with cell wall made of polysaccharides and amino acids.
D. Eukaryotic autotrophs with tissue/organ level of body organization.
E. Eukaryotes with cellular body organization.
Choose the **correct** answer from the options given below :
(1) A, C, E, D, B
(2) C, E, A, B, D
(3) A, C, E, B, D
(4) C, E, A, D, B

177 Match List - I with List - II.

	List - I		List - II
A.	Centromere	I.	Mitochondrion
B.	Cilium	II.	Cell division
C.	Cristae	III.	Cell movement
D.	Cell membrane	IV.	Phospholipid Bilayer

Choose the **correct** answer from the options given below :

(1) A-IV, B-II, C-III, D-I

(2) A-II, B-III, C-I, D-IV

(3) A-I, B-II, C-III, D-IV

(4) A-II, B-I, C-IV, D-III

178 Which one of the following equations represents the Verhulst-Pearl Logistic Growth of population?

(1) $\frac{dN}{dt} = rN\left(\frac{N-K}{N}\right)$

(2) $\frac{dN}{dt} = N\left(\frac{r-K}{K}\right)$

(3) $\frac{dN}{dt} = r\left(\frac{K-N}{K}\right)$

(4) $\frac{dN}{dt} = rN\left(\frac{K-N}{K}\right)$

179 Match List - I with List - II.

	List - I		List - II
A.	Emphysema	I.	Rapid spasms in muscle due to low Ca^{++} in body fluid
B.	Angina Pectoris	II.	Damaged alveolar walls and decreased respiratory surface
C.	Glomerulo-nephritis	III.	Acute chest pain when not enough oxygen is reaching to heart muscle
D.	Tetany	IV.	Inflammation of glomeruli of kidney

Choose the **correct** answer from the options given below :

(1) A-II, B-IV, C-III, D-I

(2) A-II, B-III, C-IV, D-I

(3) A-III, B-I, C-IV, D-II

(4) A-III, B-I, C-II, D-IV

180 Cardiac activities of the heart are regulated by :

A. Nodal tissue

B. A special neural centre in the medulla oblongata

C. Adrenal medullary hormones

D. Adrenal cortical hormones

Choose the **correct** answer from the options given below :

(1) A, C and D Only

(2) A, B and D Only

(3) A, B and C Only

(4) A, B, C and D