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Test Booklet Code : **48**

NEET-UG : 2025

Question with Solution

Date : 04.05.2025



115452344

Test Booklet No.

Test Booklet Code

48

ENGLISH

NARMADA

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/markings 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 :

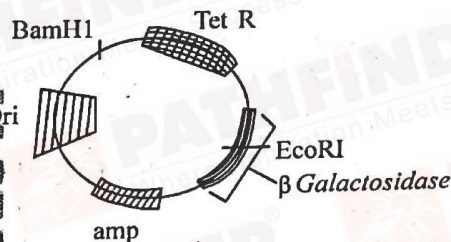
Facsimile signature stamp of Centre Superintendent :

48_English]

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91



In the above represented plasmid an alien piece of DNA is inserted at EcoRI site. Which of the following strategies will be chosen to select the recombinant colonies?

- (1) White color colonies will be selected.
- (2) Blue color colonies grown on ampicillin plates can be selected.
- (3) Using ampicillin & tetracyclin containing medium plate.
- (4) Blue color colonies will be selected.

92 The protein portion of an enzyme is called :

- (1) Apoenzyme
- (2) Prosthetic group
- (3) Cofactor
- (4) Coenzyme

93 Given below are two statements :

Statement I : The primary source of energy in an ecosystem is solar energy.

Statement II : The rate of production of organic matter during photosynthesis in an ecosystem is called net primary productivity (NPP).

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

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

Assertion (A) : A typical unfertilised, angiosperm embryo sac at maturity is 8 nucleate and 7-celled.

Reason (R) : The egg apparatus has 2 polar nuclei.

In the light of the above statements, choose the correct 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

- 95 Neoplastic characteristics of cells refer to :

- A. A mass of proliferating cell
B. Rapid growth of cells
C. Invasion and damage to the surrounding tissue
D. Those confined to original location

Choose the correct answer from the options given below:

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

- 96 Which one of the following is the characteristic feature of gymnosperms?

- (1) Seeds are absent.
(2) Gymnosperms have flowers for reproduction.
(3) Seeds are enclosed in fruits.
(4) Seeds are naked.

- 97 Match List - I with List - II.

List - I	List - II
A. Progesterone	I. Pars intermedia
B. Relaxin	II. Ovary
C. Melanocyte stimulating hormone	III. Adrenal Medulla
D. Catecholamines	IV. Corpus luteum

Choose the correct answer from the options given below :

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

- 98 Which chromosome in the human genome has the highest number of genes?

- (1) Chromosome 1
(2) Chromosome 10
(3) Chromosome X
(4) Chromosome Y

- 99 Which of the following statements about RuBisCO is true?

- (1) It is an enzyme involved in the photolysis of water.
(2) It catalyzes the carboxylation of RuBP.
(3) It is active only in the dark.
(4) It has higher affinity for oxygen than carbon dioxide.

- 100 The first menstruation is called :

- (1) Diapause (2) Ovulation
(3) Menopause (4) Menarche

- 101 Which of the following genetically engineered organisms was used by Eli Lilly to prepare human insulin?

- (1) Virus (2) Phage
(3) Bacterium (4) Yeast

- 102 Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : All vertebrates are chordates but all chordates are not vertebrate.

Reason (R) : The members of subphylum vertebrata possess notochord during the embryonic period, the notochord is replaced by a cartilaginous or bony vertebral column in adults.

In the light of the above statements, choose the correct 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

- 103 What is the main function of the spindle fibers during mitosis ?

- (1) To repair damaged DNA
- (2) To regulate cell growth
- (3) To separate the chromosomes
- (4) To synthesize new DNA

- 104 Match List I with List II :

List-I	List-II
A. Alfred Hershey and Martha Chase	I. Streptococcus pneumoniae
B. Euchromatin	II. Densely packed and dark-stained
C. Frederick Griffith	III. Loosely packed and light-stained
D. Heterochromatin	IV. DNA as genetic material confirmation

Choose the correct answer from the options given below :

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

- 105 Match List I with List II.

List I	List II
A. Adenosine	I. Nitrogen base
B. Adenylic acid	II. Nucleotide
C. Adenine	III. Nucleoside
D. Alanine	IV. Amino acid

Choose the option with all correct matches.

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

- 106 In frog, the Renal portal system is a special venous connection that acts to link :

- (1) Kidney and intestine
- (2) Kidney and lower part of body
- (3) Liver and intestine
- (4) Liver and kidney

- 107 Which of the following are the post-transcriptional events in an eukaryotic cell?

- A. Transport of pre-mRNA to cytoplasm prior to splicing
- B. Removal of introns and joining of exons.
- C. Addition of methyl group at 5' end of hnRNA.
- D. Addition of adenine residues at 3' end of hnRNA.
- E. Base pairing of two complementary RNAs.

Choose the correct answer from the options given below :

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

- 108 Polymerase chain reaction (PCR) amplifies DNA following the equation.

- (1) $2n + 1$
- (2) $2N^2$
- (3) N^2
- (4) 2^n

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

Assertion (A) : Both wind and water pollinated flowers are not very colourful and do not produce nectar.

Reason (R) : The flowers produce enormous amount of pollen grains in wind and water pollinated flowers.

In the light of the above statements, choose the correct 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

- 110 Epiphytes that are growing on a mango branch is an example of which of the following?

- (1) Predation
- (2) Amensalism
- (3) Commensalism
- (4) Mutualism

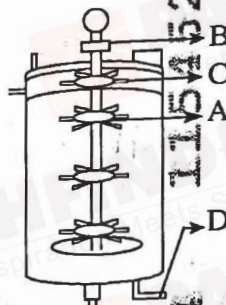
- 111 Find the correct statements :

- A. In human pregnancy, the major organ systems are formed at the end of 12 weeks.
- B. In human pregnancy the major organ systems are formed at the end of 8 weeks.
- C. In human pregnancy heart is formed after one month of gestation.
- D. In human pregnancy, limbs and digits develop by the end of second month.
- E. In human pregnancy the appearance of hair is usually observed in the fifth month.

Choose the correct answer from the options given below :

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

- 112 Identify the part of a bio-reactor which is used as a foam breaker from the given figure.



- (1) D
- (2) C
- (3) A
- (4) B

- 113 Frogs respire in water by skin and buccal cavity and on land by skin, buccal cavity and lungs.

Choose the correct answer from the following :

- (1) The statement is false for water but true for land
- (2) The statement is false for both the environment
- (3) The statement is true for water but false for land
- (4) The statement is true for both the environment

- 114 Consider the following statements regarding function of adrenal medullary hormones :

- A. It causes pupillary constriction
- B. It is a hyperglycemic hormone
- C. It causes piloerection
- D. It increases strength of heart contraction

Choose the correct answer from the options given below :

- (1) A, C and D Only
- (2) D Only
- (3) C and D Only
- (4) B, C and D Only

115 Read the following statements on plant growth and development.

- A. Parthenocarpy can be induced by auxins.
- B. Plant growth regulators can be involved in promotion as well as inhibition of growth.
- C. Dedifferentiation is a pre-requisite for re-differentiation.
- D. Abscissic acid is a plant growth promoter.
- E. Apical dominance promotes the growth of lateral buds.

Choose the option with all correct statements.

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

116 Which of the following hormones released from the pituitary is actually synthesized in the hypothalamus ?

- (1) Follicle-stimulating hormone (FSH)
- (2) Adenocorticotrophic hormone (ACTH)
- (3) Luteinizing hormone (LH)
- (4) Anti-diuretic hormone (ADH)

117 Which of the following is an example of non-distilled alcoholic beverage produced by yeast?

- (1) Beer
- (2) Rum
- (3) Whisky
- (4) Brandy

118 What is the pattern of inheritance for polygenic trait?

- (1) Autosomal dominant pattern
- (2) X-linked recessive inheritance pattern
- (3) Mendelian inheritance pattern
- (4) Non-mendelian inheritance pattern

119 Match List - I with List - II.

- | List - I | List - II |
|-----------------|------------------|
| A. Head | Enzymes |
| B. Middle piece | Sperm motility |
| C. Acrosome | Energy |
| D. Tail | Genetic material |

Choose the correct answer from the options given below :

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

120 Which of the following is an example of a zygomorphic flower?

- (1) Pea
- (2) Chilli
- (3) Petunia
- (4) Datura

121 Which of following organisms cannot fix nitrogen?

- A. *Azotobacter*
- B. *Oscillatoria*
- C. *Anabaena*
- D. *Volvox*
- E. *Nostoc*

Choose the correct answer from the options given below:

- (1) B only
- (2) E only
- (3) A only
- (4) D only

122 Which one of the following is an example of ex-situ conservation?

- (1) Zoos and botanical gardens
- (2) Protected areas
- (3) National Park
- (4) Wildlife Sanctuary

123 Who is known as the father of Ecology in India?

- (1) Ram Udar
- (2) Birbal Sahni
- (3) S. R. Kashyap
- (4) Ramdeo Misra

124 Given below are two statements :

Statement I : In the RNA world, RNA is considered the first genetic material evolved to carry out essential life processes. RNA acts as a genetic material and also as a catalyst for some important biochemical reactions in living systems. Being reactive, RNA is unstable.

Statement II : DNA evolved from RNA and is a more stable genetic material. Its double helical strands being complementary, resist changes by evolving repairing mechanism.

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

125 Given below are two statements :

Statement I : Transfer RNAs and ribosomal RNA do not interact with mRNA.

Statement II : RNA interference (RNAi) takes place in all eukaryotic organisms as a method of cellular defence.

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

126 Match List - I with List - II.

List - I	List - II
A. Heart	I. Erythropoietin
B. Kidney	II. Aldosterone
C. Gastro-intestinal tract	III. Atrial natriuretic factor
D. Adrenal Cortex	IV. Secretin

Choose the correct answer from the options given below :

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

127 All living members of the class Cyclostomata are:

- (1) Symbiotic
- ☒ (2) Ectoparasite
- (3) Free living
- (4) Endoparasite

128 Streptokinase produced by *bacterium Streptococcus* is used for

- (1) Liver disease treatment
- ☒ (2) Removing clots from blood vessels
- (3) Curd production
- (4) Ethanol production

129 Role of the water vascular system in Echinoderms is :

- A. Respiration and Locomotion
- B. Excretion and Locomotion
- C. Capture and transport of food
- D. Digestion and Respiration
- E. Digestion and Excretion

Choose the correct answer from the options given below :

- (1) B and C Only
- (2) B, D and E Only
- (3) A and B Only
- ☒ (4) A and C Only

130 Match List I with List II.

List I	List II
A. Pteridophyte	I. <i>Salvia</i>
B. Bryophyte	II. <i>Ginkgo</i>
C. Angiosperm	III. <i>Polytrichum</i>
D. Gymnosperm	IV. <i>Salvinia</i>

Choose the option with all correct matches.

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

131 Which are correct:

- A. Computed tomography and magnetic resonance imaging detect cancers of internal organs.
B. Chemotherapeutics drugs are used to kill non-cancerous cells.
C. α -interferon activate the cancer patients' immune system and helps in destroying the tumour.
D. Chemotherapeutic drugs are biological response modifiers.
E. In the case of leukaemia blood cell counts are decreased.

Choose the correct answer from the options given below:

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

132 What are the potential drawbacks in adoption of the IVF method?

- A. High fatality risk to mother
B. Expensive instruments and reagents
C. Husband/wife necessary for being donors
D. Less adoption of orphans
E. Not available in India
F. Possibility that the early embryo does not survive

Choose the correct answer from the options given below :

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

133 Consider the following :

- A. The reductive division for the human female gametogenesis starts earlier than that of the male gametogenesis.
B. The gap between the first meiotic division and the second meiotic division is much shorter for males compared to females.
C. The first polar body is associated with the formation of the primary oocyte.
D. Luteinizing Hormone (LH) surge leads to disintegration of the endometrium and onset of menstrual bleeding.

Choose the correct answer from the options given below :

- (1) B and D are true
(2) B and C are true
(3) A and B are true
(4) A and C are true

134 In bryophytes, the gemmae help in which one of the following?

- (1) Nutrient absorption
(2) Gaseous exchange
(3) Sexual reproduction
(4) Asexual reproduction

135 Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : The primary function of the Golgi apparatus is to package the materials made by the endoplasmic reticulum and deliver it to intracellular targets and outside the cell.

Reason (R) : Vesicles containing materials made by the endoplasmic reticulum fuse with the cis face of the Golgi apparatus, and they are modified and released from the trans face of the Golgi apparatus.

In the light of the above statements, choose the correct 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