

# BIOLOGY

300+ CLUB

ANSWER KEY ANALYSIS

NEET 2026

(ONLY BIOLOGY SECTION)

ON 7:30PM ONWARDS

MANPREET  
SHARMA

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BIOLOGY 300+

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Test Booklet Code

12

ENGLISH

91. "The Evil Quartet" of biodiversity loss includes which of the following ?

(1) Over-exploitation; Alien species invasions;  
Air pollution; Co-extinctions

~~(2)~~ Habitat loss and fragmentation;  
over-exploitation; Alien species invasions;  
Co-extinctions

(3) Habitat loss and fragmentation; Air pollution;  
Water pollution; Co-extinctions

(4) Over-exploitation; Alien species invasions;  
Soil pollution; Co-extinctions

Ans- 2



Test Booklet Code

12

ENGLISH

92. Which one of the following is the site for active ribosomal RNA synthesis ?

- ~~(1)~~ Nucleolus                      (2) Chromatin  
(3) Centrosome                      (4) Kinetochore

Ans- 1



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ENGLISH

93. Match List I with List II :

List I (Phase of cell cycle)	List II (Activity)
A. G <sub>1</sub> phase	I. Actual cell division occurs
B. S phase	II. Cell is metabolically active and continuously grows but does not replicate its DNA
C. G <sub>2</sub> phase	III. Synthesis of DNA occurs and the amount of DNA per cell doubles
D. M phase	IV. Proteins are synthesized while cell growth continues

Ans- 1

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

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



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ENGLISH

94. Match List I with List II :

List I	List II
A. Productivity	I. Gross primary productivity minus respiration losses
B. Net primary productivity	II. Rate of formation of new organic matter by consumers
C. Gross primary productivity	III. Rate of biomass production
D. Secondary productivity	IV. Rate of production of organic matter during photosynthesis

Ans- 2

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

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

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12

ENGLISH

95. Which of the following statements are correct ?
- A. The Amazon rainforest being cut and cleared for cultivation of soyabeans is an example of habitat loss.
  - B. Steller's sea cow and passenger pigeon became extinct due to over-exploitation by humans.
  - C. The Nile perch introduced into Lake Victoria in East Africa helped in population growth of cichlid fish in the lake.
  - D. Water hyacinth is an invasive species.
  - E. When a species becomes extinct, the plant and animal species associated with it are not affected.

Ans- 2

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

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



Test Booklet Code

12

ENGLISH

96. Identify the correct statements about biomolecules.

- A. Lipids are generally water soluble.
- B. Proteins are polypeptides.
- C. Polysaccharides are long chains of sugars.
- D. Adenine and guanine are substituted pyrimidines.
- E. Almost all enzymes are proteins.

Choose the correct answer from the options given below :

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

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Ans- 2



Test Booklet Code

12

ENGLISH

97. How many ATP and NADPH molecules are required to make one molecule of glucose through the Calvin pathway ?

- (1) 18 ATP and 12 NADPH
- (2) 6 ATP and 12 NADPH
- (3) 24 ATP and 18 NADPH
- ~~(4)~~ 12 ATP and 18 NADPH

3454

Ans- 1



Test Booklet Code

12

ENGLISH

98. Which of the following statements are *not* true regarding restriction endonucleases ?

- A. They are called molecular scissors.
- B. These are the enzymes responsible for restricting the growth of bacteriophages in *E. coli*.
- C. They cut the DNA only at the centre of the palindromic sites.
- D. They remove nucleotides only from the ends of DNA fragments.
- E. They recognise specific palindromic base-pair sequences.

Ans- 3

Choose the answer from the options given below :

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



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ENGLISH

99. Match List I with List II :

**List I**

A. Decomposition

B. Detritus

C. Mineralisation

D. Humification

**List II**

I. Accumulation of dark coloured amorphous colloidal substance

II. Release of inorganic nutrients by the activity of microbes in soil

III. Breaking down of complex organic matter into inorganic substances

IV. Dead remains of plants and animals including fecal matter

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Ans- 3

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

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



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ENGLISH

100. In which one of the following, the ovules are *not* enclosed by an ovary wall and remain exposed ?

- (1) *Selaginella*                      (2) *Funaria*  
(3) *Pinus*                                      (4) *Wolffia*

Ans- 3



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ENGLISH

101. Match List I with List II :

List I (Placentation)	List II (Example)
A. Marginal	I. Mustard
B. Axile	II. Pea
C. Parietal	III. Marigold
D. Basal	IV. Lemon

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

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

Ans- 3



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ENGLISH

102. In angiosperms, root hairs arise from which one of the following regions of the root ?

- (1) The root cap zone
- (2) The region of meristematic activity
- (3) The region of elongation
- (4) The region of maturation

Ans- 4



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ENGLISH

103. Which one of the following is *not* a characteristic of plant cells in the phase of elongation ?

- (1) Increased vacuolation
- (2) Large conspicuous nuclei
- (3) Cell enlargement
- ~~(4) New cell wall deposition~~

Ans- 2



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ENGLISH

104. Which of the following statements are correct with reference to a transcription unit ?

- A. A transcription unit in DNA is defined primarily by three regions : promoter, structural gene and terminator.
- B. The promoter is said to be located towards the 5'-end of the structural gene.
- C. The promoter is a DNA sequence that provides binding site for RNA polymerase.
- D. The promoter defines the template and coding strands.
- E. The terminator is located towards the 3'-end of the coding strand and it defines the end of the process of transcription.

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

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

Ans- 1



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ENGLISH

105. Alpha-helix is found in which level of protein structure ?

- (1) Quaternary structure
- (2) Tertiary structure
- (3) Primary structure
- (4) Secondary structure

Ans- 4



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ENGLISH

106. Which of the following statements are correct regarding amino acids ?

- A. They are substituted methanes.
- B. Serine is an aromatic amino acid.
- C. Valine is a neutral amino acid.
- D. Lysine is an acidic amino acid.

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

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

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Ans- 3



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ENGLISH

107. The main function of bulliform cells in grasses is :

- (1) to make the leaf impermeable to fungal spores.
- (2) to perform photosynthesis.
- (3) to minimize water loss during water stress.
- (4) to transport water.

Ans- 3



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ENGLISH

108. Find the *incorrect* statement(s) about photosynthesis from the following :

- A. The water splitting complex is associated with PS I.
- B.  $C_4$  plants use the  $C_3$  pathway of  $CO_2$  fixation as the main biosynthetic pathway.
- C. In  $C_4$  plants, photorespiration does not occur.
- D.  $C_3$  plants exhibit 'Kranz' anatomy.
- E. ATP synthesis in chloroplast occurs through chemiosmosis.

Choose the answer from the options given below :

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

Ans- 2



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ENGLISH

109. Match List I with List II :

List I	List II
A. Conjunctive tissue	I. Specialised cells in the vicinity of guard cells
B. Casparian strips	II. Endodermal cells rich in starch
C. Subsidiary cells	III. Tissue between xylem and phloem
D. Starch sheath	IV. Endodermal cells with suberin deposition

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

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

Ans- 3



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ENGLISH

110. Match List I with List II :

List I

List II

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| A. Genetically modified organism | I. <i>Agrobacterium tumefaciens</i> |
| B. Thermostable DNA polymerase   | II. Bt cotton                       |
| C. Ti plasmid                    | III. <i>Thermus aquaticus</i>       |
| D. pBR322                        | IV. <i>Escherichia coli</i>         |

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

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

Ans- 3



Test Booklet Code

12

ENGLISH

111. Heterophyllous development in response to environment is an example of which of the following phenomena ?

- (1) Dedifferentiation
- (2) Elasticity
- (3) Redifferentiation
- ~~(4)~~ (4) Plasticity

Ans- 4



Test Booklet Code

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ENGLISH

112. In racemose inflorescence, \_\_\_\_\_.

- (1) the main axis terminates in a flower
- (2) the growth is limited
- ~~(3)~~ flowers are borne in an acropetal succession
- (4) flowers are solitary

Ans- 3



Test Booklet Code

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ENGLISH

113. Which one of the following disorders is caused by the substitution of Glutamic acid (Glu) by Valine (Val) at the sixth position of the beta globin chain of the haemoglobin molecule ?

- (1) Haemophilia
- (2) Thalassemia
- (3) Sickle-cell anaemia
- (4) Phenylketonuria

Ans- 3



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ENGLISH

114. Match List I with List II :

- | List I                   | List II  |
|--------------------------|--|
| A. Incomplete dominance  | I. Human skin colour                                       |
| B. Co-dominance          | II. Inheritance of flower colour in <i>Antirrhinum</i> sp. |
| C. Pleiotropy            | III. Phenylketonuria disease in humans                     |
| D. Polygenic inheritance | IV. ABO blood groups                                       |

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

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

Ans- 1



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12

ENGLISH

115. Arrange the following in the correct developmental sequence related to microsporogenesis :

- A. Microspore tetrads
- B. Sporogenous tissue
- C. Pollen grains
- D. Pollen mother cells

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

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

Ans- 3



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ENGLISH

116. Arrange the following steps of DNA fingerprinting in a correct sequence.

- 1 A. Isolation of DNA and its digestion by restriction endonucleases.
- B. Hybridisation using a labelled VNTR probe.
- 2 C. Transferring of separated DNA fragments to synthetic membranes.
- D. Detection of hybridised DNA fragments by autoradiography.
- 3 E. Separation of DNA fragments by electrophoresis.

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

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

Ans- 1

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ENGLISH

117. Exploring molecular, genetic and species-level diversity for products of economic importance is called :

- (1) Biomagnification
- (2) Biofortification
- (3) Bioremediation
- ~~(4)~~ (4) Bioprospecting

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Ans- 4



Test Booklet Code

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ENGLISH

118. Which of the following statements are true with reference to the sex-determination in honeybees ?

- A. An offspring formed from the union of a sperm and an egg, develops as a female (queen or worker).
- B. An unfertilized egg develops as a male by parthenogenesis.
- C. A male has half the number of chromosomes than that of a female.
- D. Males produce sperms by meiosis.
- E. Honeybees have a haplodiploid sex-determination system.

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

119. Identify the correct sequence of steps in each cycle of Polymerase Chain Reaction :

- (1) Denaturation → Annealing → Extension
- (2) Denaturation → Extension → Annealing
- (3) Extension → Annealing → Denaturation
- (4) Annealing → Denaturation → Extension

Ans- 1



Test Booklet Code

12

ENGLISH

120. Which of the following statements are correct with respect to DNA separation, isolation and visualization ?

- A. The cutting of DNA is done by molecular scissors.
- B. The DNA fragments separate according to their size in an agarose gel, upon electrophoresis.
- C. The separated DNA fragments can be seen without staining when exposed to UV light.
- D. The separated DNA fragments, when stained with ethidium bromide, can be seen in visible light.

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

121. The main criteria used for Five Kingdom Classification proposed by R.H. Whittaker (1969) included :

- A. Cell structure
- B. Body organization
- C. Presence of flagellum
- D. Reproduction
- E. Phylogenetic relationships

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

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

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Ans- 1



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ENGLISH

122. Which one of the following is a triploid cell ?

- (1) Central cell
- (2) Primary endosperm cell
- (3) Zygote
- (4) Synergid

Ans- 2



Test Booklet Code

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ENGLISH

123. Which of the following statements are correct with reference to packaging of DNA helix ?

- A. Histones are organized to form a unit of eight molecules called histone octamer.
- B. Histones are negatively charged basic proteins.
- C. Histones are rich in the basic amino acid residues – lysine and arginine.
- D. The positively charged DNA is wrapped around the histone octamer to form nucleosome.
- E. The packaging of chromatin at higher levels requires an additional set of proteins called non-histone chromosomal proteins.

Ans- 2

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

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

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Test Booklet Code

12

ENGLISH

124. Which of the following is an *in situ* conservation method ?

- (1) Sacred Groves
- (2) Wildlife Safari Parks
- (3) Botanical Gardens
- (4) Seed Banks

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Ans- 1



Test Booklet Code

12

ENGLISH

125. In the *lac* operon, the *z* gene codes for :

- (1) transacetylase
- (2) the repressor of *lac* operon
- (3) permease
- (4) beta-galactosidase

Ans- 4



Test Booklet Code

12

ENGLISH

126. Match List I with List II :

**List I**  
**(Growth**  
**Regulator)**

**List II**  
**(Function/Effect)**

A. 2,4-D

B. GA<sub>3</sub>

C. Kinetin

D. ABA

I. Brewing industry

II. Stimulation of stomatal closure

III. Herbicide

IV. Nutrient mobilisation

Choose the correct answer from the options given below :

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

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

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

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

Ans- 3

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Test Booklet Code

12

ENGLISH

127. Arrange the following steps of somatic hybridisation in a correct sequence.

- A. Digestion of cell walls.
- B. Isolation of naked protoplasts.
- C. Fusion of protoplasts to get hybrid protoplast.
- D. Isolation of single cells from two different varieties of plants.
- E. Growing of hybrid protoplast to form a new plant.

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

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

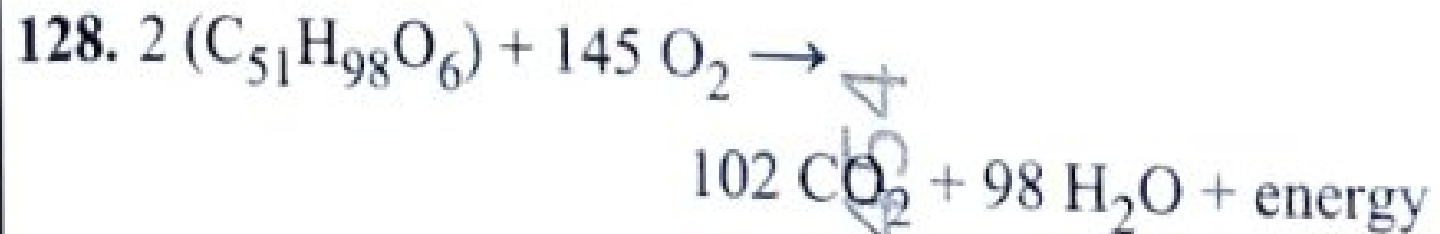
Ans- 2



Test Booklet Code

12

ENGLISH



The Respiratory Quotient (RQ) of a biomolecule used for respiration, as per the above equation, would be :

- (1) Less than 0.5
- ~~(2)~~ (2) Between 0.5 and 0.95
- (3) Between 1.25 and 2
- (4) 1.0

Ans- 2



Test Booklet Code

12

ENGLISH

129. Since the origin and diversification of life on Earth, there have been five episodes of mass extinction of species. How is the sixth extinction, which is in progress, different from the previous episodes ?

- (1) The current species extinction rates are far lower than those in previous episodes.
- (2) The present species extinction rates are 100 to 1000 times faster than in the pre-human times.
- (3) The present net species extinction rate is zero.
- (4) The current species extinction rate is nearly 10 times faster than that in previous episodes.

Ans- 2



Test Booklet Code

12

ENGLISH

130. Match List I with List II :

**List I**

**List II**

- |                   |                                   |
|-------------------|-----------------------------------|
| A. Trypsin        | I. Intercellular ground substance |
| B. Morphine       | II. Lectin                        |
| C. Concanavalin A | III. Enzyme                       |
| D. Collagen       | IV. Alkaloid                      |
- Handwritten match lines: A to III, B to IV, C to II, D to I. A vertical watermark '110553454' is present.

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

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



Test Booklet Code

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ENGLISH

131. Which one of the following statements is *not* true about the universal rules of binomial nomenclature?

- (1) Both the words in a biological name, when handwritten, are separately underlined or printed in italics.
- (2) The specific epithet in the biological name starts with a small letter.
- (3) The first word in the biological name represents the specific epithet, while the second component denotes the genus.
- (4) Biological names are generally in Latin.

Ans- 3



Test Booklet Code

**12**

ENGLISH

132. The enzyme required for carboxylation in the Calvin cycle is :

- (1) PEP carboxylase
- (2) RuBP carboxylase – oxygenase
- (3) Carboxypeptidase
- (4) Hexokinase

Ans- 2

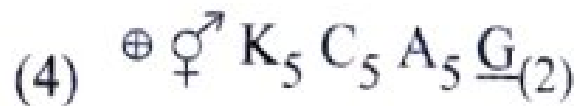
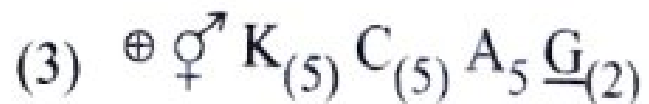
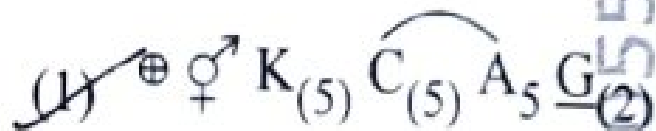


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ENGLISH

133. Which of the following floral formula is the correct floral formula of Solanaceae family ?



Ans- 1



Test Booklet Code

12

ENGLISH

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134. Which one of the following types of pollination brings genetically different types of pollen grains to the stigma ?

- (1) Geitonogamy
- (2) Autogamy
- ~~(3)~~ Xenogamy
- (4) Cleistogamy

Ans- 3



Test Booklet Code

12

ENGLISH

135. Match List I with List II :

**List I**

**(Process)**

A. Glycolysis

B. ETS

C. Accumulation  
of protons

D. Krebs' cycle

**List II**

**(Location)**

I. Inner mitochondrial  
membrane

II. Mitochondrial matrix

III. Cytoplasm

IV. Intermembrane space

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

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

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

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

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

Ans- 2



Test Booklet Code

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ENGLISH

136. Insertion of a foreign DNA at BamHI site in an *E. coli* cloning vector pBR322 results in the loss of antibiotic resistance towards :

- (1) Gentamycin
- (2) Ampicillin and tetracycline
- ~~(3) Tetracycline~~
- (4) Ampicillin

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Ans- 3



Test Booklet Code

12

ENGLISH

137. The sixth mutant codon of beta globin gene causing polymerization of Haemoglobin and change in RBC shape is \_\_\_\_\_.

(1) CAG

~~(2) GUG~~

(3) AUG

(4) GAG

Ans- 2



Test Booklet Code

12

ENGLISH

138. Choose the correct statement regarding GIFT to overcome infertility.

- (1) Ova collected from a female donor are transferred to the uterus of an infertile female.
- (2) It is the transfer of an ovum collected from a donor into the fallopian tube of another female who cannot produce ovum but can provide suitable environment for fertilization and development.
- (3) Early embryos with up to 8 blastomeres are transferred to the uterus of an infertile female.
- (4) Early embryos with up to 8 blastomeres are transferred into the fallopian tube of an infertile female.

Ans- 2



Test Booklet Code

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ENGLISH

139. Which one of the following is an appropriate example of 'sexual deceit'?

- (1) Female wasp and fig
- (2) Cuckoo and crow
- (3) *Ophrys* and bumblebee
- (4) Sea anemone and clown fish

Ans- 3



Test Booklet Code

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ENGLISH

140. Evolution of human appears parallel to the progressive development of brain and language skills. As such, the evolution of individual species in the sequence of their appearance is :

- (1) *Homo habilis* → *Homo erectus* →  
*Ramapithecus* → Neanderthal →  
*Homo sapiens*
- (2) *Ramapithecus* → *Homo habilis* →  
*Homo erectus* → Neanderthal →  
*Homo sapiens*
- (3) *Homo sapiens* → *Ramapithecus* →  
*Homo habilis* → Neanderthal →  
*Homo erectus*
- (4) Neanderthal → *Ramapithecus* →  
*Homo habilis* → *Homo erectus* →  
*Homo sapiens*

Ans- 2



Test Booklet Code

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ENGLISH

141. Match List I with List II related to embryonic development at various months of pregnancy :

**List I**

- A. The foetus movement starts and hair appears on the head
- B. The foetus develops limbs and digits
- C. The foetus develops external genital organs
- D. The foetus body is covered with fine hair; eyelids separate and eyelashes are formed

**List II**

- I. 24 weeks of pregnancy
- II. 20 weeks of pregnancy
- III. 8 weeks of pregnancy
- IV. 12 weeks of pregnancy

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

142. A group of researchers procured some fish-like animals and upon investigation the following characters were observed :

- A. Endoskeleton was made of cartilage.
- B. Ectoparasitic; as they were found attached on fish skin with their circular sucking mouth.
- C. Paired fins and scales were absent, but 7 pairs of gill slits were present.

Which of the following species of animals did they consider to fit best with these characters ?

- (1) *Exocoetus* sp.
- (2) *Branchiostoma* sp.
- (3) *Petromyzon* sp.
- (4) *Scoliodon* sp.

Ans- 3



Test Booklet Code

12

ENGLISH

143. Spermatogonia undergo a series of cell divisions to produce sperms. Select the correct statements from the following :

- 10553454
- A. Spermatogonia always undergo meiotic cell division.
  - B. Primary spermatocytes divide mitotically to produce secondary spermatocytes.
  - C. Secondary spermatocytes, through their second meiotic division, produce haploid spermatids.
  - D. Spermatids produce spermatozoa through mitosis.
  - E. Spermatids transform into spermatozoa by spermiogenesis.
- 53454

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

- 1105
- (1) C and E only
  - (2) A, C and E only
  - (3) B, C and D only ✓
  - (4) A and E only

Ans- 1



Test Booklet Code

12

ENGLISH

144. What is the probability of having children with 'O' blood group, where both mother and father are heterozygous for 'A' and 'B' blood group, respectively ?

~~(1) 50%~~

(3) 75%

53454

(2) 0%

(4) 25%

Ans- 4



Test Booklet Code

12

ENGLISH

145. Arrange the following events occurring in Renin-Angiotensin mechanism in the correct order :

- A. Increase in blood pressure and Glomerular filtration rate.
- B. Reabsorption of  $\text{Na}^+$  and water from distal parts of tubule due to Aldosterone.
- C. Fall in Glomerular filtration rate.
- D. Vasoconstriction by Angiotensin II and release of Aldosterone.
- E. Renin converts Angiotensinogen into Angiotensin I, followed by Angiotensin II.

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

146. Match List I with List II :

**List I**

**(Respiratory  
Volume)**

A. ERV (Expiratory  
Reserve Volume)

B. RV (Residual  
Volume)

C. IRV (Inspiratory  
Reserve Volume)

D. TV (Tidal Volume)

**List II**

**(Capacity in mL)**

I. 2500 – 3000 mL

II. 500 mL

III. 1000 – 1100 mL

IV. 1100 – 1200 mL

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

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

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

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

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

Ans- 3



Test Booklet Code

12

ENGLISH

147. Match List I with List II :

List I

List II

- |                  |   |
|------------------|---|
| A. Progestasert  | I. Barrier made of rubber used by females |
| B. Multiload 375 | II. Oral contraceptive                    |
| C. Diaphragm     | III. Hormone releasing IUD                |
| D. Saheli        | IV. Copper releasing IUD                  |

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

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

Ans- 1



Test Booklet Code

12

ENGLISH

148. Non-membrane bound cell organelles found in both prokaryotic and eukaryotic cells are \_\_\_\_\_.

- (1) Centrosomes
- (2) Ribosomes
- (3) Lysosomes
- (4) Mitochondria

110553454

Ans- 2



Test Booklet Code

12

ENGLISH

149. Ecological pyramids represent the relationship between the organisms at different trophic levels and they are generally inverted for :

- (1) Pyramid of energy in pond ecosystem
- ~~(2) Pyramid of biomass in sea~~
- (3) Pyramid of number in grassland
- (4) Pyramid of biomass in grassland

Ans- 2



Test Booklet Code

12

ENGLISH

150. The flightless bird with forelimbs modified as paddle-like structures suited for swimming is known as :

(1) *Struthio*

(2) *Psittacula*

(3) *Neophron*

(4) *Aptenodytes*

Ans- 4



Test Booklet Code

12

ENGLISH

151. Match List I with List II :

List I

List II

(Bioactive  
molecules)

(Importance)

- |                  |   |
|------------------|---|
| A. Streptokinase | I. Immunosuppressive agent                  |
| B. Statins       | II. Removal of clots from the blood vessels |
| C. Lipases       | III. Blood cholesterol-lowering agent       |
| D. Cyclosporin A | IV. Detergent formulations                  |

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

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

Ans- 1



Test Booklet Code

12

ENGLISH

152. Choose the correct statements regarding cell organelles and their inclusions.

- A. The endomembrane system includes Golgi complex, endoplasmic reticulum and mitochondria.
- ~~B. Rough endoplasmic reticulum bears ribosomes on its surface.~~
- C. Both mitochondria and plastids have circular DNA.
- D. A network of microtubules, microfilaments and intermediate filaments present in the cytoplasm is called cytoskeleton.
- $\alpha$  E. Mitochondrion is a single membrane-bound structure.

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

153. Select the set of fishes which belong to the class Osteichthyes :

- (1) Devil fish, Cuttlefish and Hagfish
- (2) Starfish, Hagfish and Cuttlefish
- (3) Flying fish, Angel fish and Fighting fish
- ~~(4) Saw fish, Fighting fish and Dog fish~~

Ans- 3



T

Test Booklet Code

12

ENGLISH

154. In a population of a grasshopper species, the chromosome number of some members is 23 and some other members possess 24 chromosomes.

The 23 and 24 chromosome-bearing members in this species are \_\_\_\_\_.

- (1) all males
- (2) all females
- ~~(3)~~ females and males, respectively
- (4) males and females, respectively

Ans- 4



Test Booklet Code

12

ENGLISH

155. The WBC count of a person's blood sample is 8000/cu.mm. How many eosinophils and lymphocytes would be in the same blood sample approximately ?

- (1) 160 – 240/cu.mm and 1600 – 2000/cu.mm, respectively
- (2) 100 – 120/cu.mm and 160 – 200/cu.mm, respectively
- (3) 300 – 500/cu.mm and 500 – 700/cu.mm, respectively
- (4) 300 – 500/cu.mm and 1200 – 1500/cu.mm, respectively

Ans- 1



Test Booklet Code

12

ENGLISH

156. The toxin proteins isolated from *Bacillus thuringiensis*, coded by which of the following genes would control cotton bollworms and corn borer, respectively ?

- (1) *cryIAc* and *cryIIIAb*
- (2) *cryIAc* and *cryIIAb*
- (3) *cryIAc* and *cryIAb*
- ~~(4) *cryIIAb* and *cryIAc*~~

Ans- 3



Test Booklet Code

12

ENGLISH

157. Match List I with List II :

List I (Drug)		List II (Effect)
A. Nicotine	I.	Causes sense of euphoria and increased energy
B. Morphine	II.	Stimulates adrenal gland to release catecholamines into blood circulation
C. Heroin	III.	Effective sedative and painkiller
D. Cocaine	IV.	A depressant; slows down body function

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

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

Ans- 2



Test Booklet Code

12

ENGLISH

158. Match List I with List II related to muscular/skeletal system :

- | List I                | List II   |
|-----------------------|---|
| A. Tetany             | I. Inflammation of joints   |
| B. Arthritis          | II. Autoimmune disorder affecting neuromuscular junction                  |
| C. Myasthenia gravis  | III. Wild contraction in muscle due to low $\text{Ca}^{++}$ in body fluid |
| D. Muscular dystrophy | IV. Progressive degeneration of skeletal muscle                           |

Ans- 1

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

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



Test Booklet Code

12

ENGLISH

159. In which animal do haploid cells divide mitotically to produce gametes ?

- (1) Male honeybees
- (2) Male grasshoppers
- (3) Male earthworms
- (4) Male frogs

Ans- 1



Test Booklet Code

12

ENGLISH

160. In humans, respiration occurs in the following steps. Arrange these steps in the correct order.

- A. Diffusion of  $O_2$  and  $CO_2$  between blood and tissues
- B. Diffusion of  $O_2$  and  $CO_2$  across alveolar membrane
- C. Pulmonary ventilation by which atmospheric air is drawn in and  $CO_2$  rich alveolar air is released out
- D. Cellular respiration
- E. Transport of gases by the blood

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

161. Arrange the following cell layers/structures around the female gamete, from outer to inner side :

- A. Zona pellucida
- B. Perivitelline space
- C. Corona radiata
- D. Plasma membrane of ovum

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

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

Ans- 2



Test Booklet Code

12

ENGLISH

162. The human protein named  $\alpha$ -1-antitrypsin, obtained from transgenic animals, is used for the treatment of \_\_\_\_\_.

- (1) Alzheimer's disease
- (2) Emphysema
- (3) Rheumatoid arthritis
- (4) Cystic fibrosis

Ans- 2



Test Booklet Code

12

ENGLISH

163. Select the correct statements regarding cell membrane in eukaryotic cell.

- A. Membrane of human RBCs has approximately 52% protein.
- B. Major phospholipids are arranged in a bilayer.
- C. Extensions of the plasma membrane into the cell form mesosomes.
- D. Tails towards the inner part of lipids are hydrophobic and thus protected from aqueous medium.
- E. Glycocalyx is present on the outer surface of the plasma membrane.

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

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

Ans- 4



Test Booklet Code

12

ENGLISH

164. Male frogs can be distinguished from female frogs due to the presence of :

- A. Bulging eyes
- B. Vocal sacs
- C. Webbed digits in feet
- D. Copulatory pad on first digit of fore limbs
- E. Olive green-coloured skin with dark irregular spots

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

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

Ans- 1



Test Booklet Code

12

ENGLISH

165. Which of the following equations depicts Verhulst-Pearl logistic population growth ?

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

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

Ans- 1



Test Booklet Code

12

ENGLISH

166. Choose the correct statements regarding frog's anatomy :

- A. Hepatic portal system is the special venous connection between liver and intestine.
- B. There are twelve pairs of cranial nerves arising from the brain.
- C. The ureters and oviducts open separately into the cloaca in female frogs.
- D. Hind-brain consists of cerebellum, medulla oblongata and optic lobes.
- E. Sinus venosus joins the right atrium of heart.

Ans- 2

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

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



Test Booklet Code

12

ENGLISH

167. Select the *incorrect* statements with reference to Rh grouping.

- A. Erythroblastosis foetalis is a condition observed having foetus with Rh<sup>-ve</sup> blood and mother with Rh<sup>+ve</sup> blood.
- B. Rh antigen is observed on RBCs in the majority of human beings.
- C. Before blood transfusion, Rh group should also be matched.
- D. Rh incompatibility is observed when a pregnant mother is Rh<sup>-ve</sup> and the foetus is Rh<sup>+ve</sup>.
- E. Erythroblastosis foetalis can be avoided by administering anti-Rh antibodies to the mother immediately after the delivery of the second child.

Choose the answer from the options given below :

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

Ans- 1



Test Booklet Code

12

ENGLISH

168. Which of the following statements are correct with reference to human endoskeleton ?

- A. Human skull is monocondylic.
- B. The joint between any two adjoining vertebrae is a cartilaginous joint.
- C. In human beings, the number of cervical vertebrae is seven.
- D. All ribs except the last 2 pairs are bicephalic.
- E. The occipital bone of skull is articulated with atlas vertebra.

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

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

Ans- 3



Test Booklet Code

12

ENGLISH

169. Match List I with List II :

- | List I             |      | List II  |
|--------------------|------|--|
| A. Cortisol        | I.   | Stimulates the formation of alveoli in mammary glands                |
| B. Aldosterone     | II.  | Produces anti-inflammatory reactions                                 |
| C. Cholecystokinin | III. | Stimulates reabsorption of $\text{Na}^+$ and water from renal tubule |
| D. Progesterone    | IV.  | Stimulates secretion of pancreatic enzymes and bile juice            |

Ans- 2

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

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



Test Booklet Code

12

ENGLISH

170. The following are the stages of life cycle of *Plasmodium*. Arrange the stages in the proper order.

- A. The parasites reproduce asexually in RBCs, bursting the cells.
- B. The parasites reproduce asexually in liver cells, bursting the cells and releasing into blood.
- C. Gametocytes develop in RBCs.
- D. Sporozoites reach the liver through the blood.
- E. Female mosquito injects sporozoites into humans during bite.

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

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

Ans- 2



Test Booklet Code

12

ENGLISH

171. Select the *incorrect* statements from the following :

- A. Digestive system in Platyhelminthes is incomplete.
- B. Bilateral symmetry is a characteristic feature of adult Echinoderms.
- C. Pseudocoelom is possessed by Aschelminthes.
- D. Notochord is persistent throughout life in the class Chondrichthyes.
- E. Members of class Reptilia maintain a constant body temperature.

Choose the answer from the options given below :

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

Ans- 1



Test Booklet Code

12

ENGLISH

172. The specific receptors for neurotransmitters in a synapse are present on \_\_\_\_\_.

- ~~(1)~~ Post-synaptic membrane
- (2) Pre-synaptic membrane
- (3) Myelin sheath
- (4) Schwann cell

Ans- 1



Test Booklet Code

12

ENGLISH

173. Choose the correct statements regarding muscle contraction.

- A. A motor neuron carries a signal sent by the Central Nervous System (CNS) to the sarcolemma of the muscle fibre.
- B. The neural signal generates an action potential which causes the release of  $\text{Ca}^{++}$  into sarcoplasm.
- C. Increase in  $\text{Ca}^{++}$  inactivates the actin for breaking cross bridges.
- D. Actin binds to the myosin head to form a cross bridge.
- E. Shortening of sarcomere takes place, by pulling actin filaments towards the centre of 'A' band.

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

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

Ans- 1



Test Booklet Code

12

ENGLISH

174. Which of the following is *not* an example of convergent evolution?

- (1) Eyes of octopuses and mammals
- ~~(2) Fore limbs of whales and bats~~
- (3) Wings of butterflies and birds
- (4) Flippers of penguins and dolphins

Ans- 2



Test Booklet Code

12

ENGLISH

175. The JGA (Juxta Glomerular Apparatus) is a special sensitive region formed by cellular modifications in \_\_\_\_\_ related to the same nephron.

- 110553454
- (1) Distal convoluted tubule and efferent renal arteriole
  - (2) Proximal convoluted tubule and afferent renal arteriole
  - (3) Distal convoluted tubule and afferent renal arteriole
  - (4) Proximal convoluted tubule and efferent renal arteriole

Ans- 3



Test Booklet Code

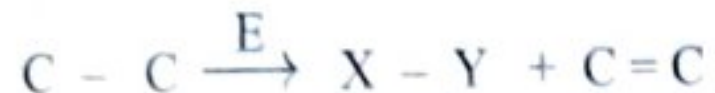
12

ENGLISH

176. The following reaction depicts the activity of a particular class of enzymes :

X    Y

|    |



(Substrate)      (Product)      (Product)

Identify the enzyme class 'E' from the following options :

- (1) Ligases
- (2) Lyases
- (3) Isomerases
- (4) Transferases

Ans- 2



Test Booklet Code

12

ENGLISH

177. Match List I with List II :

- | List I              | List II                                 |
|---------------------|---|
| A. Molluscs         | I. Pulmonary respiration only           |
| B. Reptiles         | II. Branchial respiration               |
| C. Adult amphibians | III. Cellular respiration               |
| D. <i>Amoeba</i>    | IV. Pulmonary and Cutaneous respiration |

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

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

Ans- 2



Test Booklet Code

12

ENGLISH

178. What is the reason behind production of large holes in 'Swiss Cheese' ?

- (1) The production of large amount of  $\text{CO}_2$  by *Clostridium butylicum*
- (2) The production of large amount of  $\text{CO}_2$  and  $\text{H}_2$  by *Trichoderma polysporum*
- (3) The production of large amount of  $\text{CO}_2$  and  $\text{H}_2$  by lactic acid bacteria called *Lactobacillus*
- ~~(4)~~ The production of large amount of  $\text{CO}_2$  by *Propionibacterium sharmanii*

Ans- 4



Test Booklet Code

12

ENGLISH

179. Match List I with List II with respect to chronology of evolution of life forms :

- | List I           | List II   |
|------------------|---|
| A. About 65 mya  | I. Jawless fish probably evolved                      |
| B. About 500 mya | II. The dinosaurs suddenly disappeared from the earth |
| C. About 350 mya | III. Seaweeds and few plants probably existed         |
| D. About 320 mya | IV. Invertebrates were formed and became active       |

Ans- 1

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

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



180. Choose the correct statements regarding population interactions between two species.

- A. In both parasitism and commensalism, only one species benefits and the other species is harmed.
- B. Both species benefit in mutualism.
- C. Both species benefit in commensalism.
- D. In parasitism, only one species benefits and the other species is harmed.
- E. In amensalism, one species is harmed and the other is unaffected.

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

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

Ans- 4