

## MODEL PAPER (INTER PART-I)

## BIOLOGY

(OBJECTIVE TYPE)

Time Allowed : 20 Minutes

## PAPER – I

Maximum Marks : 17

Note : Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1	A biome is a large regional community primarily determined by the : (A) Population (B) Organisms (C) Climate (D) Temperature
2	Amino acids are found in a sequence according to the instructions transcribed on : (A) tRNA (B) rRNA (C) mRNA (D) DNA
3	The essential raw material of which the coenzymes are made up of : (A) Metal ions (B) Vitamins (C) Co-factor (D) Metal activators
4	A typical compound microscope has the resolution : (A) 2.0 mm (B) 0.2 $\mu\text{m}$ (C) 2.0 $\mu\text{m}$ (D) 0.02 $\mu\text{m}$
5	A vertebrate with backbone, fins and gills is called as : (A) Amphibian (B) Fish (C) Aquatic mammal (D) Both A & C
6	What is not true among followings : (A) Glycogen is storage carbohydrate of cyanobacteria (B) Glycogen is storage carbohydrate of fungi and animals (C) Glycogen is storage carbohydrate of bacteria (D) Glycogen is storage carbohydrate of plants
7	The ciliates reproduce sexually by : (A) Oogamy (B) Binary fission (C) Multiple fission (D) Conjugation
8	Most of sac fungi have asci inside macroscopic fruiting bodies called : (A) Basidia (B) Ascophores (C) Ascodia (D) Ascocarps
9	The fruit of <i>Solanum tuberosum</i> is called : (A) Pod (B) Berry (C) Legume (D) Spadix
10	'Venus' flower basket is the common name of : (A) <i>Physalia</i> (B) <i>Euplectella</i> (C) <i>Spongilla</i> (D) <i>Hydra</i>
11	'Portuguese Man of War' is the common name of : (A) <i>Physalia</i> (B) <i>Euplectella</i> (C) <i>Spongilla</i> (D) <i>Hydra</i>
12	In 1 square mm of tobacco leaf the number of chloroplast is : (A) $\frac{1}{2}$ million (B) 1 million (C) 1200 (D) 12000
13	During ETC electrons are transferred from $\text{FADH}_2$ to : (A) NAD (B) Co-Q (C) Co-A (D) Cytochrome-b
14	Botulism is caused by : (A) <i>Clostridium</i> (B) <i>Salmonella</i> (C) <i>Campylobacter</i> (D) <i>Mycobacterium</i>
15	Name the enzyme which catalyzes the following reactions : $\text{CO}_2 + \text{H}_2 \rightarrow \text{H}_2\text{CO}_3$ (A) Carbonic anhydrase (B) Decarboxylase (C) Carbonic oxidase (D) Dehydrogenase
16	Which of the following is not present in a sieve tube : (A) Nucleus (B) Mitochondrion (C) Endoplasmic reticulum (D) Plasma membrane
17	The pressure in ventricles rises closing the atrioventricular valves and the semi lunar valves of aorta and pulmonary artery open during phase of the cardiac cycle called : (A) Atrial diastole (B) Ventricular diastole (C) Ventricular systole (D) Atrial systole

16

**MODEL PAPER (INTER PART-I)**  
**(ESSAY TYPE)**

**BIOLOGY**  
**PAPER – I**

Time Allowed : 2.40 hours  
Maximum Marks : 68

**SECTION – I**

**2. Write short answers to any EIGHT (8) questions :** **16**

- (i) Define anabolism and catabolism.
- (ii) How apoenzyme differs from holoenzyme?
- (iii) What is active site? Give the functions of its two parts.
- (iv) Define inhibitors and give examples.
- (v) Give two differences in fungi and water molds.
- (vi) Give one benefit of *ergotine* and *aspergillus*.
- (vii) Distinguish the diploblastic and triploblastic animals.
- (viii) What is polymorphism? Give example of animals showing polymorphism.
- (ix) Differentiate the Acoelomates and Coelomates.
- (x) Give four characteristics of Phylum Echinodermata.
- (xi) What do you mean by compensation point?
- (xii) Define Photolysis. Write its products.

**3. Write short answers to any EIGHT (8) questions :** **16**

- (i) Define the terms parasitology and microbiology.
- (ii) What types of environmental hazards do automobiles and tanneries cause?
- (iii) Write the functions of plastids.
- (iv) What is the difference between Microtubules and Microfilament?
- (v) Give the diseases caused by *Trypanosoma* and *Plasmodium*. Write their vectors also.
- (vi) Write the composition of shells found in radiolarians and foraminifera.
- (vii) Give one harms of water mold.
- (viii) What is compare the shell of mollusks and dinoflagellates?
- (ix) What is photorespiration? Give its importance.
- (x) What the structural and functional difference between myoglobin and hemoglobin?
- (xi) Compare Monocytes with lymphocytes.
- (xii) How symplast pathway differs from the apoplast pathway?

**4. Write short answers to any SIX (6) questions :** **12**

- (i) Write down the class and order of corn.
- (ii) Give two functions of flagellum of bacteria.
- (iii) Write down the parts sporophyte of moss plant.
- (iv) Give the structure of gametophyte of *Adiantum*.
- (v) Differentiate the calyx and corolla of mako and rose flowers.
- (vi) Compare the sessile flower and a sessile animal.
- (vii) Write the symptoms and cure of anorexia nervosa.
- (viii) Give two disorders caused due to malfunction of colon.
- (ix) What is botulism? Give the name of its causative agent.

**SECTION – II**

**Note : Attempt any THREE questions.**

5. (a) What is hypothesis? How it is formulated? 4  
(b) Explain respiration in cockroach. Also, draw the diagram to support your answer. 4
  6. (a) Describe the importance of water. 4  
(b) Write any four benefits of fungi. 4
  7. (a) Give the structure and functional disorders of lysosomes. 4  
(b) Explain the absorption in small intestine. 4
  8. (a) Explain the rules and importance of binomial nomenclature. 4  
(b) Describe the structure and functions of human heart. 4
  9. (a) Compare the cell wall and cell membrane of cyanobacteria and eubacteria. 4  
(b) Draw the Krebs' cycle and explain it briefly. 4
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