

BIOLOGY (New Course)

Inter Part - I

Superintendent Signature

Time: 3 hours

March 05

Note: There are three sections in the paper i.e. A, B & C. Attempt Section-A and return it to the Superintendent within the given time. No mark will be awarded for cutting, erasing & overwriting. Mobile phones are strictly prohibited.

Time: 20 mins

SECTION A

Marks: 18

QNo1. There are four possible answers (A,B,C,D) for each question. Select the correct one and write it in the answer box.

- i. The most prominent cell organelle of bacterial cell other than DNA is _____
 a) Mesosomes b) Ribosome c) Lysosomes d) Nucleosome
B
- ii. Amino-acids mainly differ from each other by the differences in their _____
 a) R-group b) Amino-group c) Carboxyl group d) Alpha-group
A
- iii. The optimum pH value for pepsin to work is _____
 a) 6.8 b) 5.5 c) 4.5 d) 2
D
- iv. All photosynthetic autotrophs prepare their organic food molecules by using _____
 a) CO₂ b) H₂O c) H₂S d) Nitrogen
A
- v. Of the following antibiotics, which is the most effective most viral infections?
 a) Penicillin b) Erythromycin c) Zmax d) None of these
D
- vi. An extra-chromosomal DNA ring in Bacteria is called _____
 a) Nucleoid b) Plasmid c) Pili d) Mesosomes
B
- vii. Symptom of malaria appear when _____
 a) Gametes are produced b) Red-blood cells burst
 c) Sporozoites enter the liver d) Oocytes formed
B
- viii. Double fertilization is the characteristics features of only the _____
 a) Angiosperms b) Gymnosperms c) Pteridophytes d) Bryophytes
A
- ix. Organs of excretion in annelids are _____
 a) Flame-cells b) Nephridia c) Malpighian tubule d) Kidneys
B
- x. The increase in thickness of the plants due to the activity of the Cambium is called _____
 a) Primary growth b) Secondary growth c) Tertiary growth d) None of these
B
- xi. Which of the following does not manufacture digestive juice?
 a) Liver b) Kidneys c) Stomach d) Pancreas
B
- xii. Memory cells of immune system are derived from _____
 a) T-Lymphocytes b) Plasma cells c) B-Lymphocytes d) Microglia cells
B
- xiii. All of the following refers to Lysosomes except _____
 a) Slightly larger than mitochondria b) Roughly spherical
 c) Single membrane bounded d) Contain powerful digestive enzymes
A
- xiv. Which of the following has the greatest number of glycoside bonds?
 a) Glucose b) Amylose c) Sucrose d) Maltose
B
- xv. The ultimate source of energy for maintenance of life on earth is _____
 a) Carbohydrate b) ATP c) Sun d) Mitochondria
C
- xvi. Photorespiration occurs when there is _____
 a) More O₂ than CO₂ b) More CO₂ than O₂ c) Moist temperate season d) Open stomata
A
- xvii. What are the two major envelope proteins that surround the HIV Viron?
 a) gp-120 and gp-40 b) gp-120 and gp-41 c) gp-120 and gp-42 d) gp-120 and gp-43
B
- xviii. Glycocalyx is _____
 a) Gram negative bacteria b) Loose Capsule c) Invaginated cell membrane d) Appendage
B

(SKE 112V101)
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Note: Time allowed for Section - B & C is 2:40 hours.

SECTION - B

Marks: 40

Q2: Answer any TEN parts of the following. All carry 4 marks.

- i. List three main function of Nucleus.
- ii. Give the chemical nature of Glycosidic bond?
- iii. How P^{H} of a cell affects the enzyme activity?
- iv. What is the main difference between Cyclic and non-Cyclic Photophosphorylation?
- v. Describe the differences between a retrovirus and a typical bacteriophage.
- vi. Define Symbiosis.
- vii. Discuss the economic importance of Yeast.
- viii. Define alternation of generation and give its importance.
- ix. What is Polymorphism and what is its importance?
- x. Why insectivorous plants depends on insects?
- xi. What are the main symptoms of dyspepsia?
- xii. List three benefits of fever?
- xiii. What do you mean by Chemiosmosis?

SECTION - C

Marks: 27

Note: Attempt any 3 of the following questions. All questions carry equal marks.

- Q3. Describe the adaptation shown by Bryophytes to Land Life.
- Q4. Describe the role of sun-light in the process of Photosynthesis.
- Q5. Explain the Double Helical Structure of DNA as proposed by the 'Watson and Crick'?
- Q6. Describe the mechanism of opening and closing of Stomata.