

OBJECTIVE

NOTE: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

QUESTION NO. 1

- 1 The branch of biology which deals with study of ancestral history is
(A) Genetics (B) Zoogeography (C) Evolution (D) Palaeontology
- 2 Percentage of carbohydrates in mammalian cell is
(A) 1 % (B) 2 % (C) 3 % (D) 4 %
- 3 Covalently bonded non-protein part is called
(A) Co-enzyme (B) Prosthetic group (C) Activator (D) Co-factor
- 4 Parenchymatous cells are specialized for
(A) Store food (B) Support (C) Photosynthesis (D) Growth
- 5 The size of Parvovirus is
(A) 100 nm (B) 20 nm (C) 250 nm (D) 75 nm
- 6 Which one is present in all bacteria?
(A) Cell wall (B) Mesosome (C) Ribosomes (D) Plasmid
- 7 The example of zooflagellates is
(A) Forams (B) Vorticella (C) Entamoeba (D) Trypanosoma
- 8 A kind of headache migraine is treated by
(A) Ergotine (B) Lovastatin (C) Griseofulvin (D) Aspergillus
- 9 Funaria is an example of
(A) Hepaticopsida (B) Bryopsida (C) Psilophyta (D) Anthoceropsida
- 10 Reproductive system is formed from
(A) Mesoderm (B) Endoderm (C) Ectoderm (D) Hypoderm
- 11 In Echinodermata the larva is
(A) Planula (B) Trochophore (C) Bipinnaria (D) Echino
- 12 Chemical link between catabolism and anabolism is
(A) Bioenergetics (B) Respiration (C) Photosynthesis (D) ATP
- 13 In first step of citric acid cycle, acetyl Co A reacts with oxaloacetate to form
(A) NADH (B) Pyruvate (C) Citrate (D) FADH
- 14 Common ectoparasite in non-human mammal is
(A) Tics (B) Leech (C) Tapeworm (D) Flea
- 15 Oxygen content of fresh air is about
(A) 10 ml/liter (B) 20 ml/liter (C) 2 ml/liter (D) 200 ml/liter
- 16 Apoplast pathway becomes discontinuous in endodermis due to
(A) Pericycle (B) Casparian strip (C) Cortex (D) xylem
- 17 Atrioventricular valve present in left side of heart is
(A) Tricuspid (B) Bicuspid (C) Pulmonary valve (D) Semilunar

ION NO. 2 Write short answers any Eight (8) questions of the following

- (1) What do you know about ionization of water?
- (2) Define co-factor. Write its function.
- (3) How enzyme concentration affect the rate enzyme action?
- (4) What are competitive inhibitors? Why they are called reversible inhibitors?
- (5) Define mycorrhizae. What is its effect on its partner?
- (6) What are zygomycetes? Why they are named so?
- (7) How reproduction occurs in Platyhelminthes?
- (8) Write scientific and common names of two intestinal parasites of man from Phylum Aschelminthes.
- (9) How complete metamorphosis is different from incomplete metamorphosis?
- (10) Comment on the placement of Echinodermata at the top of list of invertebrate phyla.
- (11) Define absorption spectrum along with its diagram.
- (12) Give the steps of glycolysis where NADH is formed.

ION NO. 3 Write short answers any Eight (8) questions of the following

- (1) What is hydroponic culture technique?
- (2) Differentiate between chemotherapy and radiotherapy.
- (3) What are chromoplasts?
- (4) Define fluid mosaic model.
- (5) Name parasitic amoeba. What is the disease caused by it?
- (6) What are Apicomplexans? Give example.
- (7) Why fungus like protists are not fungi?
- (8) What is *Phytophthora infestans*?
- (9) Define double fertilization in Angiosperm?
- (10) Differentiate between circinate venation and reticulate venation?
- (11) What are blue babies?
- (12) Define bleeding in plants?

ION NO. 4 Write short answers any Six (6) questions of the following

- (1) Differentiate between virion and prion.
- (2) Give postulates of "Germ Theory of Disease" by Robert Koch
- (3) Can we get along without large intestine? If not, why?
- (4) What is dyspepsia? Give its symptoms.
- (5) Differentiate between ingestion and Egestion.
- (6) Air is better respiratory medium than water. How?
- (7) What is Rubisco? What is its function?
- (8) Define cutaneous and pulmonary respiration.
- (9) What are causes and symptom of pulmonary tuberculosis?

SECTION-II

Attempt any Three questions from this section

- (a) Describe Biological Methods under following headings
 - (i) Deductive and Inductive reasoning
 - (ii) Theory and Law
- (b) Discuss various pathways in root followed by water to reach xylem tissue.
- (a) What are monosaccharide? Give their characteristics.
- (b) Describe sexual reproduction in fungi.
- (a) Describe physical and chemical methods to control bacteria.
- (b) Discuss different evolutionary steps in the evolution of mega phyll leaf.
- (a) Write a detailed note on Hepatitis.
- (b) What is glycolysis? Draw its scheme of reactions.
- (a) Differentiate between Prokaryotic and Eukaryotic cells.
- (b) Write a note on four methods of nutrition in plants.