

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 Excretory organs present in Annelids are
(A) Nephridia (B) Flame cell (C) Malpighian tubules (D) Kidney
- 2 The cartilaginous fishes have scales
(A) Cycloid (B) Ganoid (C) Placoid (D) Ctenoid
- 3 Formula of lactic acid is
(A) $C_3H_6O_3$ (B) $C_3H_4O_3$ (C) $C_3H_5O_3$ (D) C_3H_5OH
- 4 Which human organ is protected by carotenoids ?
(A) Skin (B) Liver (C) Eye (D) Brain
- 5 pH of fresh saliva is
(A) 6 (B) 7 (C) 8 (D) 9
- 6 Diameter of bronchiole is
(A) 1 mm (B) 1 cm (C) 1 dm (D) 1 m
- 7 Guttation occurs in plants through
(A) Lenticels (B) Hydathode (C) Cuticle (D) Stomata
- 8 Lymph vessels empty in
(A) Arteries (B) Arteriole (C) Capillaries (D) Vein
- 9 The study of tissues is called
(A) Morphology (B) Anatomy (C) Physiology (D) Histology
- 10 Lipid molecule store double amount of energy as compared to same amount of carbohydrate due to high proportion of
(A) C - N bond (B) C - H bond (C) C - O bond (D) C - C bond
- 11 Reversible inhibitors form weak linkage with
(A) Substrate (B) Product (C) Enzyme (D) Reactant
- 12 The number of pores in nuclear membrane of erythrocyte is
(A) 03 or 04 (B) 02 or 03 (C) 05 or 06 (D) 30,000
- 13 Small pox is caused by
(A) Bacteria (B) Virus (C) Protozoan (D) Fungi
- 14 The smallest bacteria is
(A) Mycoplasma (B) E. Coli (C) Pseudomonas (D) Clostridium
- 15 The vector in sleeping sickness disease is
(A) House fly (B) Tsetse fly (C) Fruit fly (D) Butter fly
- 16 The example of soil dwelling carnivorous fungus is
(A) Pleurotus (B) Penicillium (C) Arthrotrys (D) Armillaria
- 17 Bryophytes are generally believed to have evolved from
(A) Brown algae (B) Red algae (C) Golden algae (D) Green algae

QUESTION NO. 2 Write short answers of any Eight (8) parts of the following

16

- (1) Differentiate between nucleotide and nucleoside
- (2) Differentiate between prosthetic group and coenzyme
- (3) Define Lock and Key model of catalysis and who proposed it ?
- (4) What are non competitive inhibitors ?
- (5) Differentiate between asci and ascocarps
- (6) What is histoplasmosis ?
- (7) Differentiate between polyps and medusae
- (8) Define metamorphosis
- (9) Enlist two beneficial insects
- (10) What is syrinx and where it is situated ?
- (11) Enlist stages of cellular respiration
- (12) What are photosystems ?

QUESTION NO. 3 Write short answers of any Eight (8) parts of the following

16

- (1) How does theory differ from law ?
- (2) What is hydroponic culture technique ?
- (3) Write down chemical composition of secondary wall
- (4) What is the significance of vacuole in plants ?
- (5) How Algae differ from plants ?
- (6) Define zooflagellates
- (7) What is conjugation ?
- (8) What is the significance of *Physarum polycephalum* ?
- (9) Differentiate between microphyll and megaphyll leaf
- (10) Define Ovule and Integument
- (11) What is symplast pathway ?
- (12) What are blue babies ?

QUESTION NO. 4 Write short answers of any Six (6) parts of the following

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- (1) What is lysogenic cycle of phage ?
- (2) Name four phases of Bacterial growth
- (3) Enlist enzymes secreted by jejunum
- (4) What do you know about disease Dyspepsia ?
- (5) Write some features of rectum
- (6) What is the capacity of Haemoglobin to pick and lose O₂ – during breathing ?
- (7) What is tuberculosis ? Give its causes
- (8) Write disadvantages of Gas-exchange in water
- (9) Name the properties of Respiratory Surfaces in animals

SECTION-II

Note: Attempt any Three questions from this section

8 x 3 = 24

- Q.5 (A) Define any eight branches of biology
(B) Describe pressure flow theory of phloem transport
- Q.6 (A) Write a note on carbohydrates
(B) What are various methods of asexual reproduction met within fungi ?
- Q.7 (A) What are the uses and misuses of antibiotics ?
(B) Write a detailed note on class Gymnospermae
- Q.8 (A) Explain replication of Bacteriophage
(B) Draw labelled sketch of Calvin cycle
- Q.9 (A) Define plastids. Discuss structure and function of chloroplast
(B) Discuss characteristic processes involved in holozoic nutrition