

Roll No. _____ (To be filled in by the candidate) (Academic Sessions 2015 – 2017 to 2018 – 2020)
BIOLOGY 219-(INTER PART – I) Time Allowed : 20 Minutes
Q.PAPER – I (Objective Type) GROUP – I Maximum Marks : 17
PAPER CODE = 6465

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	Excretory system of flatworms is composed of :	(A) Nephron	(B) Nephridia	(C) Flame cells	(D) Villi
2	Which one of the following is aerobic bacteria :	(A) Campylobacter	(B) E.Coli	(C) Pseudomonas	(D) Spirochaete
3	In respiratory chain NADH is oxidized by :	(A) Cytochrome b	(B) Co-enzyme Q	(C) Oxygen	(D) H ₂ O
4	Cotton is a pure form of :	(A) Cellulose	(B) Glycogen	(C) Wax	(D) Starch
5	The casparian strips are present in :	(A) Cortex cells of roots	(B) Cells of pericycle	(C) Endodermis cells of roots	(D) Cells of phloem
6	Most common smut fungi are :	(A) Ustilago	(B) Puccinia	(C) Penicillium	(D) Yeast
7	Cell membrane has 60 – 80 % :	(A) Lipids	(B) Proteins	(C) Carbohydrates	(D) Vitamins
8	Muscles of stomach are of which type :	(A) Skeletal	(B) Smooth	(C) Cardiac	(D) Voluntary
9	Ascaris Lumbricoides is an intestinal parasite of :	(A) Monkey	(B) Man	(C) Horse	(D) Camel
10	The respiratory system is most efficient in :	(A) Man	(B) Birds	(C) Fish	(D) Snake
11	Lycopods are commonly called :	(A) Whisk ferns	(B) Horse tails	(C) Club mosses	(D) Hornworts
12	AIDS is caused by :	(A) Fungi	(B) Bacteria	(C) Virus	(D) Algae
13	The substance which inhibits blood clotting :	(A) Heparin	(B) Histamine	(C) Fibrin	(D) Albumin
14	Common name for pyrophyta is :	(A) Euglenoids	(B) Diatoms	(C) Dinoflagellates	(D) Kelps
15	Poisons, like cyanide are examples of :	(A) Enzymes	(B) Co-enzymes	(C) Inhibitors	(D) Co-factors
16	Which metal atom is present in chlorophyll :	(A) Cu	(B) Fe	(C) Mg	(D) K
17	In cockroach partly digested food is temporarily stored in :	(A) Rectum	(B) Gizzard	(C) Crop	(D) Colon

SECTION – I

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

16

- (i) Define conjugated molecules.
- (ii) How enzyme concentration affects the rate of enzyme action?
- (iii) Define lock and key model of enzyme.
- (iv) What is enzyme to enzyme chain?
- (v) Differentiate between fragmentation and budding in fungi.
- (vi) What is mycorrhizae? Give its types.
- (vii) Differentiate between proterostomia and deuterostomia.
- (viii) Define polymorphism. Also give example.
- (ix) What do you know about class hirudinea?
- (x) Write down some general characteristics of class chondrichthyes.
- (xi) Define chemiosmosis.
- (xii) Write down the molecular formulae of chlorophyll “a” and “b”.

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

16

- (i) Differentiate between biocontrol and bioremediation.
- (ii) What is cloning? Write one method of cloning.
- (iii) How intermediate filaments support cell?
- (iv) Give role of vacuole in plant cell.
- (v) Why slime molds are included in kingdom protocista?
- (vi) Differentiate between zooflagellates and dinoflagellates.
- (vii) Why euglena is difficult to classify?
- (viii) Write features of chrysophyta.
- (ix) Differentiate between monocots and dicots.
- (x) Which plant group is called arthropytes and why?
- (xi) What are lenticels? Write their use.
- (xii) Give blood route in fish circulatory system.

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

12

- (i) What is capsid and capsomeres?
- (ii) What is contribution of Louis Pasteur in microbiology?
- (iii) What are hunger pangs?
- (iv) What are hemorrhoids?
- (v) Define assimilation.
- (vi) What are spiracles?
- (vii) Why photorespiration occurs in plants?
- (viii) What are parabronchi?
- (ix) What is respiratory distress syndrome?

SECTION – II

Note : Attempt any THREE questions.

5. (a) Write in detail, drug treatment and gene therapy.
(b) Discuss functions of lymphatic system.
6. (a) Describe primary and secondary structure of protein.
(b) Discuss asexual reproduction in fungi.
7. (a) Discuss nutrition of bacteria.
(b) Describe economic importance of poaceae.
8. (a) Discuss life cycle of bacteriophage.
(b) Sketch two phases of glycolysis.
9. (a) Describe structure and functions of mitochondria.
(b) Discuss process of absorption in large intestine.

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BIOLOGY 219-(INTER PART – I) Time Allowed : 20 Minutes
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PAPER CODE = 6462

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	Radiotherapy and chemotherapy are used in the treatment of : (A) Fever (B) Cancer (C) Dengue (D) Arthritis
2	Total number of amino acid in insulin are : (A) 51 (B) 141 (C) 151 (D) 50
3	The enzyme with optimum pH 5.50 is : (A) Arginase (B) Sucrase (C) Pepsin (D) Enterokinase
4	The factory of ribosome is the : (A) Nucleolus (B) Mitochondria (C) Chloroplast (D) Vacuole
5	Pig could be the source of infection of hepatitis : (A) A (B) B (C) E (D) C
6	Cell wall is only absent in : (A) E.Coli (B) Diplococcus pneumoniae (C) Hypomicrobium (D) Mycoplasma
7	Trypanosoma is an example of : (A) Amoebae (B) Zooflagellates (C) Ciliates (D) Foraminiferan
8	Loose smut of wheat is caused by : (A) Ustilago (B) Penicillium (C) Aspergillus (D) Alternaria
9	The earliest group of vascular plants is : (A) Lycopsida (B) Sphenopsida (C) Psilopsida (D) Pteropsida
10	Organ of voice in birds is called as : (A) Syrinx (B) Larynx (C) Tongue (D) Pharynx
11	Mammals become dominant in the : (A) Ordovician period (B) Silurian period (C) Cenozoic period (D) Devonian period
12	In the first step of the citric acid cycle, acetyl-CoA reacts with oxaloacetate to form : (A) Succinate (B) Rubisco (C) Malate (D) Citrate
13	Haem portion of haemoglobin is also a porphyrin ring but containing on iron instead of : (A) Magnesium (B) Potassium (C) Sodium (D) Chlorine
14	In human stomach HCl is secreted by : (A) Mucous cells (B) Oxyntic / parietal cells (C) Zymogen cells (D) Chief cells
15	Most elaborate and efficient respiratory system is present in : (A) Man (B) Fish (C) Birds (D) Reptiles
16	The left systemic arch disappears in : (A) Mammals (B) Fish (C) Reptiles (D) Birds
17	Basophils produce a substance that inhibits blood clotting. (A) Heparin (B) Platelets (C) Fibrinogen (D) Eosinophil

SECTION – I

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

- 16

- (i) What are conjugated compounds?
- (ii) Differentiate between prosthetic group and coenzyme.
- (iii) How enzyme substrate complex is formed?
- (iv) If more enzymes are added in a system its rate of reaction remain unchanged, why?
- (v) Define rust. Give example.
- (vi) What are symptoms of ergotism?
- (vii) Differentiate between enterocoelous and schizocoelous feature.
- (viii) What is blastostyle?
- (ix) How madrepora is important?
- (x) Write similarities of birds and reptiles.
- (xi) Draw action spectrum showing photosynthesis rate at various light colours.
- (xii) Differentiate between chlorophyll – a and chlorophyll – b.

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

16

- (i) Define biotechnology.
- (ii) What is deductive reasoning?
- (iii) What is magnification?
- (iv) Describe salient features of cell theory.
- (v) What is thromboembolism?
- (vi) What is systemic circulation?
- (vii) How green algae and plants are identical?
- (viii) What are trichonymphas?
- (ix) Write two characteristics of dinoflagellates.
- (x) What are the basis of diversity in protista?
- (xi) What is protonema?
- (xii) What are integuments?

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

12

- (i) Give disadvantages of common names.
- (ii) Name different types of bacteria on the basis of flagella presence.
- (iii) Enlist various functions of oral cavity.
- (iv) What is peristalsis and antiperistalsis?
- (v) Tubular digestive system is more efficient than sac like digestive system. Give reasons.
- (vi) Why ventilation in water is far more difficult than air?
- (vii) Write down the causes of asthma.
- (viii) What happens when diving reflex is activated?
- (ix) Briefly describe tuberculosis.

SECTION – II

Note : Attempt any THREE questions.

5. (a) Write a note on protection and conservation of environment. 4
 (b) Give any eight functions of blood. 4
6. (a) What are polysaccharides? Discuss starch and glycogen in detail. 4
 (b) Describe, giving examples, different ways in which fungi are useful to human. 4
7. (a) Describe characteristics of cyanobacteria. 4
 (b) What adaptation made bryophytes able to live on land? 4
8. (a) Describe lytic cycle of bacteriophage. 4
 (b) Write note on Calvin Cycle. 4
9. (a) Define plastids. Discuss structure and function of chloroplast. 4
 (b) Discuss the process of absorption of food in small intestine. 4