Inter (Part I)-A-2019

☆ Roll No. 76245/ (To be filled in by candidate)

(For all sessions)

| Paper Code | 6 | 4 | 6 | 1 |
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RWP-11-19

# Biology (Objective Type)

**Time: 20 Minutes** **Marks: 17**

NOTE: Write answers to the questions on the objective answer sheet provided. Four possible answers A,B,C and D to each question are given. Which answer you consider correct, fill the corresponding circle A,B,C or D given in front of each question with Marker or pen ink on the answer sheet provided.

1.1. The most recent era is:
(A) Proterozoic (B) Paleozoic (C) Cenozoic (D) Mesozoic

2. The specific heat of vaporization of water in Kcal/kg is:
(A) 580 (B) 574 (C) 597 (D) 602

3. Optimum pH for Arginase enzyme is:
(A) 4.50 (B) 5.50 (C) 9.70 (D) 7.60

4. Cisternae are associated with:
(A) ER (B) Mitochondria (C) Nucleus (D) Chloroplast

5. Madcow infection is caused by:
(A) Bacteria (B) Prions (C) Virions (D) Protozoans

6. Reserve food material in cyanobacteria is:
(A) Starch (B) Glucose (C) Glycogen (D) Cellulose

7. Pelomyxa palustris is an example of:
(A) Bacterium (B) Ciliate (C) Algae (D) Amoeba

8. Aspergillus belongs to Phylum:
(A) Zygomycota (B) Deuteromycota (C) Ascomycota (D) Basidiomycota

9. Fern Prothallus is:
(A) Sporophyte (B) Saprophyte (C) Gametophyte (D) Seed

10. kangaroo belongs to sub-class:
(A) Eutheria (B) Metatheria (C) Prototheria (D) Megatheria

11. Sea urhin belongs to phylum:
(A) Arthropoda (B) Echinodermata (C) Annelida (D) Protozoa

12. The number of chloroplast in each mesophyll cell is about:
(A) 10-100 (B) 10-200 (C) 20-100 (D) 20-200

13. The breaking of terminal bond of ATP releases energy of about:
(A) 4.5Kcal (B) 3.7Kcal (C) 6.8Kcal (D) 7.3Kcal

14. Casparian strips are present in cells of root:
(A) Cortex (B) Epidermis (C) Endodermis (D) Xylem

15. The valves present in the veins are called:
(A) Bicuspid (B) Semi-lunar (C) Tricuspid (D) Aortic

16. Excess gastric secretions is an important factor of:
(A) Peptic ulcer (B) Obesity (C) piles (D) Food poisoning

17. Respiratory system is most efficient in:
(A) Fish (B) Man (C) Snake (D) Bird

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# Biology (Essay Type)

Time: 2:40 Hours Marks: 68

## Section - I

2x22=44

**2. Write short answers of any eight parts from the following.** 2x8=16

i. What are Dikaryotic hyphae?
ii. Differentiate between radiotherapy and gene therapy.
iii. Draw labelled diagram of HIV.
iv. Diffferentiate between pepsin and pepsinogen.
v. How pH affects the rate of enzyme action?
vi. How temperature affects the rate of enzyme action?
vii. Give two important characteristics of mammals.
viii. Give some affinities of Echinoderms with hemichordates.
ix. What is the agricultural importance of Earthworms.
x. Differentiate between infestation and disinfestation.
xi. Define Biodiversity? Give its percentage of different groups of organisms discovered so for.
xii. Differentiate between septate and non-septate hyphae?

**3. Write short answers of any eight parts from the following.** 2x8=16

i. Write down main physical methods to control bacteria.
ii. Write down two important characteristics of diatoms.
iii. How algae differ from plants?
iv. What is Trypanosoma? What disease does it cause?
v. Give two examples each of Red algae and Green algae.
vi. Name the classes of division bryophyte.
vii. Differentiate between homospory and heterospory.
viii. What is biological oxidation?
ix. Differentiate between absorption and assimilation.
x. Differentiate between aerobic and anaerobic respiration.
xi. What is botulism?
xii. Differentiate between carnivores and omnivores

**4. Write short answers of any six parts from the following.** 2x6=12

i. What is glycogenosis type-II disease?
ii. What is differentially permiable membrane?
iii. Differentiate between amylose and amylopectin starches.
iv. What do you know about blue babies?
v. Compare guttation with transpiration.
vi. Write four properties of respiratory surface in animals.
vii. What is respiratory distress syndrome?
viii. Define photorespiration.
ix. Differentiate between breathing and cellular respiration.

## Section - II

NOTE: **Answer any three questions from the following.** 8x3=24

5. (a) What is Biological Method? Describe its various steps. 4
   (b) Give four differences between arteries and veins. 4
6. (a) Describe polysaccharides in detail. 4
   (b) Fungi are well adapted to live on land. Give reasons. 4
7. (a) What are plastids? Describe structure and function of chloroplast. 4
   (b) Explain the process of digestion in cockroach. 4
8. (a) Give characteristics of viruses. 4
   (b) Draw glycolysis. Give its energy balance. 4
9. (a) Discuss bacteria under the given headings (i) Ecological importance (ii) Economic importance 4
   (b) Define alternative of generation. Explain significance of Alternation of generation. 4