

S.Y.BSc.
Semester III Examination
Zoology Paper II
USZO302

All Questions are compulsory.

Figures to the right indicate full marks.

Draw neat and labelled diagrams wherever necessary.

Time: 3 hours

Total marks: 100

Q.1. a) Fill in the blanks.

(5 Marks)

1. When nutrients are obtained by feeding on other organisms, it is _____.
(saprophytic, holozoic, autotrophic, chemotrophic)
2. Amoeba captures food by _____. (crawling, pseudopodia, predation, cilia)
3. _____ act upon the fats converting them into fatty acids and glycerol. (protease, lipase, amylase, esterase)
4. Trachea is divided into right and left _____.
(bronchus, hilum, pulmonary region, arteries)
5. Alpha cells of islets of Langerhans secrete _____. (Insulin, Glucagon, Thyroxine, Pepsin)

b) Match the column

(5 Marks)

- | | |
|---------------------|----------------------------|
| 1. oxytocin | a. Haemolymph |
| 2. Multiple fission | b. Suprapharyngeal ganglia |
| 3. Nerve ring | c. Duodenal mucosa |
| 4. Book lungs | d. Positive feedback |
| 5. Secretin | e. Plasmodium |

c) Write true or false

(5 Marks)

1. Lysosomes contain digestive enzymes.
2. Amylase convert starch into glucose.
3. Green glands are part of cockroach digestive system.
4. Hemoglobin contains porphyrin prosthetic group.
5. Starfish possess pseudopodia.

d) Give one word for

(5 Marks)

1. Mouth located on first segment of earthworm.
2. Specialized movement of the alimentary canal.

3. Ultrafiltration takes place in.
4. Process of formation of blood corpuscles.
5. Nerves without myelin sheath.

Q.2. A) Answer the following. (Any one)

(10 Marks)

1. Explain briefly digestive system of cockroach. Explain briefly physiology of digestion in cockroach.
2. Explain briefly digestive system of earthworm. Write a note on nephridia as excretory organs in earthworm.

Q.2. B) Answer the following. (Any two)

(10 Marks)

1. Explain briefly digestive system in bivalve.
2. Write a note on flame cells.
3. Write short note on digestion of proteins with respect to man.
4. Write a note on Organ of Bojanus

Q.3. A) Answer the following (Any one).

10 Marks

1. Describe briefly air sacs in pigeon.
2. Give a brief account of heart of man.

Q.3. B) Answer the following (Any two).

(10 Marks)

1. Write a note on book lungs in spider.
2. Explain the structure of gills of cartilaginous fish.
3. Write short note on open circulation.
4. Describe briefly lungs as respiratory organs in frog.

Q.4. A) Answer the following (Any one)

(10 Marks)

1. Describe different types of neurons on the basis of structure and function.
2. Explain types of fins in Pisces.

Q.4. B) Answer the following. (Any two)

(10 Marks)

1. Write a note on irritability in *Paramecium*
2. Give an account on types of legs in insects.
3. Describe the structure of mammalian egg.
4. Write a note on viviparity.

Q.5. Write a short note on (Any four)

(20 Marks)

1. Ultrafiltration
2. Spermatogenesis
3. Structure of amphibian kidney.
4. Structure of cilia.
5. Heart of cockroach
6. Structure of synapse
7. Ruminant stomach
8. Formation of gemmule in sponges