

3.(Sem-5) ZOO M 1

2 0 1 9

ZOOLOGY

(Major)

Paper : 5.1

(Animal Physiology)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blanks/Choose the correct answer :

1×7=7

- (a) Fibrinogen is produced by _____.
- (b) Myofibrils of heart are surrounded by _____.
- (c) Monocytes and tissue macrophages are powerful _____.
- (d) Different varieties of leukocytes are found in
 - (i) marrow pool
 - (ii) blood pool
 - (iii) tissue pool
 - (iv) All of the above

- (e) Stellate cells are found in
 - (i) pancreas
 - (ii) stomach
 - (iii) liver
 - (iv) intestine
- (f) Column of Bertin is present in
 - (i) heart
 - (ii) nerve cell
 - (iii) kidney
 - (iv) muscle
- (g) Nissl bodies are present
 - (i) in axon hillock
 - (ii) in axon
 - (iii) in allover the soma
 - (iv) within dendrite

2. Answer the following :

2×4=8

- (a) Differentiate between myelinated and non-myelinated nerve fiber.
- (b) What are the functions of proteolytic enzymes?
- (c) Differentiate between granulocytes and agranulocytes.
- (d) Write about the functions of myoglobin.

(3)

3. Answer any *three* questions from the following : $5 \times 3 = 15$

(a) Describe briefly the structure and function of neuromuscular junction.

(b) Write a note on O_2 dissociation curve.

(c) Describe briefly about the process of chloride shift.

(d) Describe the saltatory propagation of nerve impulse.

(e) Write a note on the functions of pancreatic juice.

4. Mention the different types of gastric glands. Describe the role of stomach in digestion.

$3 + 7 = 10$

Or

What is villi? What is the role played by intestinal villi? Describe the process of absorption in intestine.

$1 + 3 + 6 = 10$

5. Describe the process of blood clotting mechanism.

10

Or

Describe the structure and functions of different types of WBC.

$5 + 5 = 10$

(4)

6. What is muscle protein? What are the roles played by different types of muscle proteins during muscle contraction? $2+8=10$

Or

What is all-or-none law? Describe the process of impulse transmission through a non-myelinated nerve fiber. $3+7=10$
