

**2024/FYUG/ODD/SEM/
ZOODSM-201T/069**

FYUG Odd Semester Exam., 2024

**ZOOLOGY
(3rd Semester)**

Course No. : ZOODSM-201T
(Physiology and Biochemistry)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

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

UNIT—I

1. Answer any *two* from the following : 2×2=4
- (a) Mention the functions of liver.
 - (b) Write a short note on the hormonal regulation of digestive enzymes.
 - (c) What is pulmonary ventilation?
2. (a) What is digestion? Describe the process of digestion in the alimentary canal with suitable diagram. 1+7+2=10

J25/644

(Turn Over)

(2)

Or

- (b) What is respiration? Describe the process of transport of carbon dioxide in blood with suitable illustration. $1+7+2=10$

UNIT—II

3. Answer any *two* from the following : $2 \times 2 = 4$
- (a) What is glomerulus? What is its function?
- (b) What is haemostasis?
- (c) Mention the composition of blood.

4. (a) Define nephron. Describe the mechanism of urine formation with suitable diagram. Add a note on counter-current mechanism. $1+7+2=10$

Or

- (b) Describe the internal structure of heart of mammal with diagram. Add a note on cardiac cycle. $7+3=10$

UNIT—III

5. Answer any *two* from the following : $2 \times 2 = 4$
- (a) Write a short note on oogenesis.
- (b) Mention the hormones secreted by the anterior pituitary gland.
- (c) Write the endocrine functions of pancreas.

J25/644

(Continued)

(3)

6. (a) Describe the process of spermatogenesis with suitable illustration. Add a note on the hormonal control of menstrual cycle. $6+4=10$

Or

- (b) Describe the structure of thyroid gland with diagram. Mention the functions of thyroid hormones. $6+4=10$

UNIT—IV

7. Answer any *two* from the following : $2 \times 2 = 4$
- (a) What is resting membrane potential?
- (b) Distinguish between myelinated and non-myelinated nerve fibres.
- (c) What is synaptic transmission?

8. (a) Discuss the process of conduction of nerve impulse across the myelinated nerve fibre with proper illustration. $8+2=10$

Or

- (b) Describe the mechanism of skeletal muscle contraction with proper diagram. $8+2=10$

J25/644

(Turn Over)

(4)

UNIT—V

9. Answer any *two* from the following : $2 \times 2 = 4$

- (a) How are enzymes named?
- (b) Write a short note on glycolysis.
- (c) What is electron transport chain?

10. (a) Describe the mechanism of enzyme action with suitable illustration. 10

Or

- (b) Discuss the process of β -oxidation of fatty acid. Add a note on urea cycle.

$7 + 3 = 10$

J25—620/644

2024/FYUG/ODD/SEM/
ZOODSM-201T/069