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(July)

ZOOLOGY

(Honours)

SEVENTH PAPER

(**Biochemistry, Animal Physiology and
Endocrinology**)

Marks : 56

Time : 3 hours

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

Answer Question No. **1** and *any four* from the rest

1. Answer any *three* of the following : 4×3=12

- (a) Discuss the importance of pH regulation in the body.
- (b) Describe the process of osmoregulation in freshwater fishes.
- (c) Explain the transamination and deamination reactions with suitable examples.

(d) Write a note on placental hormones.

(e) Discuss the role of hormones in the regulation of oogenesis.

- 2.** (a) Mention the different steps involved in the biosynthesis of thyroid hormones. 7
- (b) Discuss the role of neurosecretory cells. 4
- 3.** Describe the different types of enzyme inhibition with suitable examples. 11
- 4.** (a) Explain how electrons move through different respiratory chain complexes in inner mitochondrial membrane. 8
- (b) Write the ring structures of D-ribose and D-glucose. 3
- 5.** (a) Explain with suitable diagrams the mechanism of gaseous exchange through fish gills. 5
- (b) Explain the structure and function of haemoglobin with suitable diagrams. 6
- 6.** How does estrous cycle differ from menstrual cycle? Give a brief account of the different phases of menstrual cycle. 4+7=11

(3)

7. (a) Describe the mechanism of action of steroid hormones. 6

(b) Write a note on various gastrointestinal hormones. 5

8. Write notes on any *two* of the following :
 $5\frac{1}{2} \times 2 = 11$

(a) Lactation

(b) Tertiary structure of proteins

(c) Effect of substrate concentration on enzyme activity

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