

3/EH-63 (iii) (Syllabus-2015)

2022

(November)

ZOOLOGY

(Elective/Honours)

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

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. Write in brief on any *three* of the following :

4×3=12

- (a) Structure of a neuron
- (b) Reflex action
- (c) Mechanism of breathing in vertebrates
- (d) Essential amino acids
- (e) Hormones of adrenal glands

2. Describe the structure of a nephron with a suitable diagram. Explain the mechanism of urine formation in vertebrates.

4+7=11

3. Describe the physiology of digestion and absorption of proteins. 6+5=11
4. Describe the structure of a pituitary gland. Mention the hormones secreted by the pituitary gland and mention their functions. 3+5+3=11
5. Write a note on the properties of enzymes. Describe the mechanism of enzyme action with a suitable example. What are the various factors which can affect the enzyme activity? 3+4+4=11
6. Explain the double helical structure of DNA with the help of a suitable diagram. What are the structural differences between DNA and RNA? 8+3=11
7. What is a TCA cycle? Describe the cycle in detail mentioning the enzymes and coenzymes involved in each step. 2+9=11
8. Write short notes on any *two* of the following : 5½×2=11
- (a) Water-soluble vitamins
- (b) Synaptic transmission
- (c) Cofactors and coenzymes
