

2019

(October)

ZOOLOGY

(Elective/Honours)

THIRD PAPER

**(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 which is compulsory and
any four from the rest**

1. Write in brief on any three of the following :
4×3=12

- (a) Different types of RNA
- (b) Double-helical structure of DNA
- (c) Ultrastructure of a neuron
- (d) Functions of blood
- (e) Physico-chemical factors that affect enzyme activity

**2. Define vitamin. Give a brief account of the
fat-soluble vitamins, their sources and
functions.**
1+6+2+2=11

(Turn Over)

(2)

3. With labelled diagrams, describe the structure of a nephron and its role in the formation of urine. $2+3+6=11$
4. Explain the ultrastructure of skeletal muscle. Elaborate the mechanism of contraction of skeletal muscle with suitable diagrams. $5+6=11$
5. Define hormone. Name the gonadal hormones and discuss their functions. $1+4+6=11$
6. Classify carbohydrates with suitable examples. Add a note on the significance of carbohydrates. $7+4=11$
7. Name the six major classes of enzymes. Explain each class with appropriate examples. $4+7=11$
8. Write short notes on any two of the following : $5\frac{1}{2}\times 2=11$
 - (a) Cofactors and coenzymes
 - (b) Neuroendocrine system in insects
 - (c) β -oxidation of fatty acids
 - (d) Synaptic transmission
