

SUBJECT CODE: 15ZL/MC/VP34

B.Sc. DEGREE EXAMINATION - NOVEMBER 2017
BRANCH VI A – ADVANCED ZOOLOGY & BIOTECHNOLOGY
THIRD SEMESTER

COURSE : MAJOR CORE
PAPER : VERTEBRATE PHYSIOLOGY
TIME : 3 HOURS

MAX. MARKS: 100

SECTION A

ANSWER ALL THE QUESTIONS.

(10 x 3 = 30)

1. State the function of the following enzymes a) Amylase b) Trypsin c) Lipase
2. Define the following a) Respiratory Quotient b) Stenohaline c) Reflex action
3. Write any three functions of adrenaline hormone.
4. Fill in the blanks:
 - a) The expansion for EEG is -----.
 - b) The functional junction between the dendritic region of one neuron and the axon ending of another neuron is called _____.
 - c) _____ is a male reproductive hormone.
5. Differentiate between unipolar, bipolar and multipolar neurons.
6. Define the following a) Heart Beat b) Blood Pressure c) Isotonic Muscle Contraction.
7. List any three functions of insulin.
8. Explain any three properties of muscle.
9. State any three important functions of saliva.
10. State the function of the peptide hormones secreted by the anterior pituitary gland.

SECTION B

ANSWER ANY FIVE QUESTIONS.

(5 x 6 = 30)

11. Describe the physiology of gastric digestion.
12. Explain the ornithine cycle.
13. Define Chloride Shift and add a note on oxygen dissociation curve.
14. With a neat diagram explain the structure of a nephron and add a note on its function.
15. Describe the structure and functions of thyroid gland.
16. Describe the physiology of impulse conduction through the nerve fibre.
17. Explain the causes and theories of Ageing.

SECTION C

ANSWER ANY TWO QUESTIONS.

(2 x 20 = 40)

18. Differentiate between ammonotelic, uricotelic and ureotelic organisms. Describe the mechanism of osmoregulation exhibited by vertebrates.
19. Describe the structure of the female reproductive system. Explain the various stages of the menstrual cycle and add a note on the function of the female reproductive hormones.
20. Draw and describe the ultra-structure of striated muscles. Add a note on the theories of muscle contraction.
21. Explain in detail the physiological adaptations to diving and high altitudes.
