

SECTION-A

- 1- Write short answers to the followings questions: 7
- i) Name the source and function of ESTROGEN.
 - ii) What is the difference between GENERATOR POTENTIAL and an ACTION POTENTIAL?
 - iii) How some CELLS protect, support and provide NOURISHMENT to NEURONS?
 - iv) Give the role of X-ORGAN and Y-ORGAN in ARTHROPODS.
 - v) Why a MAMMALIAN RED BLOOD CELL is shaped like a DOUGHNUT without a complete hole?
 - vi) Define HOLOBLASTIC and MEROBLASTIC CLEAVAGE.
 - vii) How does a HYDROSTATIC SKELETON function?

SECTION-B

- 2- a) Give a brief account of locomotion of soft bodied INVERTEBRATES. 4.0
b) Explain the role of LIVER and GALLBLADDER in DIGESTION. 3.5
- 3- a) Describe HORMONAL control of Female Reproductive Function. 3.5
b) Explain the Physical process used by animals to exchange heat with the ENVIRONMENT. 4.0
- 4- Describe HEARING and EQUILIBRIUM in TERRESTRIAL VERTEBRATES. 7.5
- 5- a) Write a note on the types and functions of White Blood Cells. 4.0
b) Explain the role of GIZZARDS and RUMENS in DIGESTION. 3.5
- 6- a) Give structure and role of ADRENAL GLANDS in MAMMALS. 3.5
b) Discuss the role of RESPIRATORY PIGMENTS in GAS TRANSPORT in animals. 4.0
- 7- a) Give an account of the PROPRIOCEPTORS and TACTILE RECEPTORS. 4.0
b) Describe the ENDOCRINE SYSTEMS of VERTEBRATES other than BIRDS or MAMMALS 3.5
- 8- a) Discuss the Transmission of the ACTION POTENTIAL between Cells. 3
b) Explain the SLIDING FILAMENT theory of Muscle Contraction. 4.5
- 9- a) Give an account of the FIXED-MEMBRAIN-RECEPTOR MECHANISM. 3
b) Describe HYPOTHALMAUS as NEUROENDOCRINE INTEGRATION CENTER. 4.5