

**2020-21**  
**Time - 3 hours**  
**Full Marks – 60**

*Answer all groups as per instructions.  
Figures in the right hand margin indicate marks.  
Candidates are required to answer  
in their own words as far as practicable.*

**Group-A**

1. Answer all questions or fill in the blanks as required. [1x8]
- a) What is the embryonic origin of nervous tissue?
  - b) Name the hormone that regulates the activity of Osteoclasts.
  - c) Name the cell that does not undergo cell division.
  - d) What is the resting potential value of a typical neuron?
  - e) What is the death of follicle in ovary called?
  - f) What the arrest of secondary breast development at puberty in girls is called?
  - g) Name the hormone that is measured in a pregnancy test?
  - h) Which hormone is responsible for lactation in post-partum women?

**GROUP-B**

2. Answer any eight of the following questions within two or three sentences each. [1 $\frac{1}{2}$ x8]
- a) What is neuro-sensory epithelium?
  - b) What is endochondral ossification?
  - c) What is bone resorption?
  - d) What is rigor mortis?
  - e) What is membrane potential?
  - f) What are acquired reflexes?
  - g) What are sertoli cells?
  - h) What are corpus albicans?
  - i) Why hypothalamus is considered as the neuroendocrine gland?
  - j) Why pancreas is considered as a heterocrine?

**GROUP-C**

3. Write notes on any eight of the followings within 75 words: [2x8]
- a) Bone growth
  - b) Stratified epithelium
  - c) Nerve fibres
  - d) Action potential
  - e) Sliding filament theory
  - f) Neuro-muscular junction
  - g) Reflex arc
  - h) Puberty
  - i) Menstrual cycle
  - j) Pineal gland

**GROUP- D**

4. Answer any four questions within 500 words each. [6x4]
- a) Describe the structure, types and functions of muscular tissue.
  - b) Discuss the structure, types and functions of a neuron.
  - c) Discuss the structure of a synapse and add a note on the mechanism of synaptic transmission.
  - d) Give an account of physiology of male reproductive system.
  - e) Give an account of methods of contraception in females.
  - f) Describe the histology of adrenal cortex. Discuss the hormones secreted by them and their mechanism of action.
  - g) Discuss the histology and functions of hormones secreted by thyroid.

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