



(ii) Parafollicular cells

(iii) Mammary glands (3)

(e) Fill in the blanks :

(i) \_\_\_\_\_ and \_\_\_\_\_ are the components of TRIAD.

(ii) Hypersecretion of hGH during childhood causes \_\_\_\_\_ while during adulthood results in \_\_\_\_\_.

(iii) \_\_\_\_\_ and \_\_\_\_\_ are examples of inhibitory neurotransmitters. (6)

2. (a) What is an action potential ? Describe the events leading to generation of an action potential.
- (b) Explain why the action potential is an all-or -none phenomenon ? (2,8,2)
3. (a) Draw a well labelled diagram of T.S. Adrenal gland (mammal).
- (b) Give an account of the physiological effects of the hormones secreted by the adrenal gland. (4,8)
4. (a) Discuss the role of ATP and calcium ions in the excitation-contraction coupling in a skeletal muscle fibre.
- (b) State the condition in which the muscles become rigid after death and give reasons for the same. (10,2)
5. (a) Explain the mechanism of action of water-soluble hormones.
- (b) What changes take place in neurotransmitter release from photoreceptors in light and dark conditions ? (6,6)
6. (a) Draw a magnified view of transverse section of seminiferous tubule of mammalian testis.
- (b) Discuss the role of various hormones involved in male reproduction.
- (c) What is cryptorchidism ? (4,6,2)
7. Write short notes on the following topics: **(any three)**
  - (a) Endochondral ossification
  - (b) Saltatory conduction in medullary nerve fibres
  - (c) Calcium homeostasis
  - (d) Muscle proteins (4,4,4)

(900)