

Instructions:

1. Attempt all questions from each section
2. Figures to the right indicate full.
3. Make suitable assumptions wherever necessary.
4. Write separate sections on separate answer sheets.

Section - I

Q-1 Describe physiological anatomy of hypothalamus. Enumerate afferent and efferent connections of hypothalamus and briefly describe functions of hypothalamus 15

OR

Q-1 Define peristalsis. Describe mechanism of secretion and functions of succus entericus. 15

Q-2 Describe the functional anatomy of spinal cord and enumerate the ascending and descending tract. 15

OR

Q-2 1. Describe Krebs's cycle in detail 07

2. Draw and labelled diagram of structure of cerebral cortex and describe functions of each layer. 08

Q-3 Write Short Note (Any three) 15

(a) functions of basal ganglion (b) olfactory pathway

(c) Differences between upper motor neuron and lower motor neuron (d) beta- oxidation of lipid

(e) define and describe properties of enzyme

Q-4 M C Q 05

1. Muscle spindle is;

- a. Receptor for a variety of multi synaptic reflex
- b. Receptor for stretch reflex
- c. Occurs only in antigravity muscles
- d. Excited by both stretch and contraction of the muscles in which it is located

2. Pyramidal tracts originate in;

- a. Somatosensory cortex
- b. Premotor cortex
- c. Motor cortex
- d. All of the above

3. Taste buds are not located on the

- a. Dorsum of the tongue
- b. Edges of the tongue
- c. Right and left of the midline and back edge of the tongue
- d. epiglottis, soft palate and pharynx

4. true about gastrin;

- a. increase secretion of pepsinogen
- b. decrease gastric motility
- c. acid stimulates gastrin secretion
- d. its secretion increases specially after protein meal

5. which carbohydrate is not hydrolyzed by pancreatic amylase?

- a. Starch
- b. Glycogen
- c. Cellulose
- d. Dextrin

Section - II

- Q-1 Describe the hypothalamic control of endocrine secretions. 15
- OR
- Q-1 Define puberty. Describe secondary sexual changes occurring in male and female in detail. 15
- Q-2 What is different between dwarf and cretin and describe physiology of thyroxine hormone. 15
- OR
- Q-2 1. Enumerate hormone secreted from pituitary gland and describe oxytocin in detail 08
2. Describe physiology of placenta 07
- Q-3 Write Short Note (Any three) 15
- (a) Differences between enzyme & co enzyme (b) insulin
(c) Describe electron transfer pathway in mitochondria (d) IUCD
(e) Enumerate fat soluble vitamins and describe any one
- Q-4 M C Q 05
1. The number of ATP molecules generated in the conversion of glycogen to lactate is
 - a. 2
 - b. 14
 - c. 36
 - d. 38
 2. The essential amino acids;
 - a. Are found in all dietary proteins
 - b. Can be formed in the body
 - c. Must be present in the diet
 - d. Are necessary to provide adequate amount of ATP
 3. Antioxidant vitamins include all except
 - a. Vitamin E
 - b. Vitamin C
 - c. Vitamin A
 - d. Vitamin D
 4. Which of the following hormone does not need a second messenger?
 - a. FSH
 - b. LH
 - c. Glucagon
 - d. Estrogen
 5. Not a feature of sertoli cells
 - a. Nourish sperm and control their release
 - b. Provide blood testes barrier
 - c. Secrete testosterone
 - d. Secrete inhibin B