

Q.P. Code :01251

[Time: Three Hours]

[Marks:70]

Please check whether you have got the right question paper.

- N.B:
1. All questions are compulsory.
 2. Figures to the right indicate full marks.
 3. Draw neat labelled diagram wherever necessary.

- Q.1. a. Answer the following : 12
- i. Classify neurons on the basis of their structure.
 - ii. Define
 - a) Tidal volume
 - b) Vital capacity
 - iii. Enlist the secretions of the cells in the pancreatic islets.
 - iv. Name the taste bud bearing papillae of the tongue.
 - v. Describe the symptoms of Schizophrenia.
 - vi. What is Goiter?
- Q.1. b. Answer the following: 03
- i. Follicular cells of the thyroid gland secrete the hormones _____ and _____.
 - ii. Name the parts of the brain stem.
 - iii. The ability of the lens to change curvature for near vision is termed _____.
- Q.2. a. Answer the following : (**any two**) 08
- i. Discuss cellular atrophy.
 - ii. What are the factors responsible for cell death?
 - iii. Explain the pathogenesis of cancer.
- Q.2. b. Discuss the biological effects of : (**any one**) 03
- i. Nuclear radiation
 - ii. X rays
- Q.3. a. Answer the following : (**any two**) 08
- i. Discuss the ion channels involved in generation of nerve action potential.
 - ii. Write a note on the blood brain barrier.
 - iii. Enlist the cranial nerves. Name the organs that they innervate.
- Q.3. b. Write short notes on: (**any one**) 03
- i. Parkinson's disease
 - ii. Epilepsy

Turn over

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- Q.4. a. Answer the following : **(any two)** 08
i. Explain internal & external respiration.
ii. Discuss the anatomy and physiology of the nose.

iii. Explain the functions of larynx and trachea.
- Q.4. b. Write short note on : **(any one)** 03
i. Asthma
ii. Emphysema
- Q.5. a. Answer the following : **(any two)** 08
i. Discuss the physiological effects of glucocorticoids.
ii. Write a note on thyroid hormones.
iii. What are the secretions of the pituitary gland?
- Q.5. b. Write a short note on: **(any one)** 03
i. Diabetes mellitus
ii. Addison's disease
- Q.6. a. Answer **any one** of the following : 04
i. Discuss olfactory receptors and physiology of olfaction.
ii. Explain the physiology of hearing.
- Q.6. b. Answer **any one** of the following : 04
i. Discuss the neurotransmitters of the autonomic nervous system and their receptors.
ii. Distinguish between sympathetic and parasympathetic nervous system.
- Q.6. c. Answer **any one** of the following : 03
i. Draw a neat labelled diagram of the skin.
ii. Explain the role of rod and cone cells in physiology of vision.