

[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 indicates full marks.
 3. Draw neat, Labelled diagrams wherever necessary

- Q.1** a) Answer the following: **(12 Marks)**
- i) Define the terms
 - 1) Vital Capacity
 - 2) Residual volume.
 - ii) Enlist the hormones secreted by posterior pituitary gland with their biological role.
 - iii) What is diabetes insipidus?
 - iv) Enlist the neuroglia cells of CNS with functions.
 - v) Give the signs and symptoms of Parkinson's disease.
 - vi) Discuss in short light & dark adaptation.
- b) Answer the following: **(03 Marks)**
- i) Respiratory centers are situated in _____.
 - ii) _____ & _____ are the inhibitory neurotransmitters.
 - iii) Name the bones of auditory ossicles.
- Q.2** a) Answer the following (**Any Two**): **(08 Marks)**
- i) Compare benign & malignant tumour.
 - ii) Discuss in detail cellular adaptations.
 - iii) Explain the etiology of cancer.
- b) Discuss the biology effects of (**Any one**): **(03 Marks)**
- i) UV radiation
 - ii) Nuclear radiation

Turn over

- Q.3 a) Answer the following (Any Two): (08 Marks)**
- i) Explain the process of generation of action potential.
 - ii) Discuss the structure & functions of brain stem.
 - iii) Describe the functional areas of cerebrum.

- b) Answer the following (Any one): (03 Marks)**
- i) Write a note on Epilepsy.
 - ii) Discuss the pathophysiology of Anxiety.

- Q.4 a) Answer the following (Any Two): (08 Marks)**
- i) Explain external & internal respiration.
 - ii) Discuss the mechanism involved in control of respiration.
 - iii) Draw a neat, labelled diagram of bronchial tree.

- b) Write a short note on (Any one): (03 Marks)**
- i) Pneumonia
 - ii) Bronchitis

- Q.5 a) Answer the following (Any Two): (08 Marks)**
- i) Discuss the various types of anterior pituitary cells with physiological roles.
 - ii) Describe the physiological role of thyroid hormones.
 - iii) Write a note on renin-angiotensin-aldosterone system.

- b) Answer the following (Any One): (03 Marks)**
- i) Discuss the effect of hyposecretion of anterior pituitary hormones on human body.
 - ii) Write a short note on Goiter.

- Q.6 a) Answer the following (Any one): (04 Marks)**
- i) Explain the anatomical features of eye with the help of a diagram.
 - ii) Discuss the physiology of smell.

- b) Answer the following (Any One): (04 Marks)**
- i) Differentiate between somatic & autonomic nervous system.
 - ii) Write the effect of parasympathetic & sympathetic nervous system on following organ.
1)Heart 2)Lungs 3)Sweat gland 4)Eye

- c) Answer the following (Any One): (03 Marks)**
- i) Discuss the structure of taste bud.
 - ii) Write the functions of skin.