

(Time: 3 Hours)

(Total marks: 80)

N.B.: (1) All questions are compulsory

(2) Figures to right indicate full marks

Q 1 A. Answer the following:

16 M

- i) Enlist the vital centers located in medulla oblongata.
- ii) Enumerate the cells and secretions of pancreatic islets.
- iii) Define: a) Vital capacity b) Tidal volume
- iv) What is cerebral hypoxia?
- v) Write a note on iris.
- vi) Give the symptoms of myxoedema.
- vii) Define cell injury.
- viii) Enlist the causes of COPD

Q 1 B. Answer the following:

4 M

- i) Name the auditory ossicles.
- ii) _____ enzyme is responsible for degradation of adrenaline.
- iii) What is saltatory conduction of nerve impulse.
- iv) Give the functions of nose.

Q 2 A. Answer any two of the following

8 M

- i) Elaborate on types of cellular adaptations.
- ii) Differentiate between apoptosis and necrosis.

Q 2 B. Answer any one of the following

4 M

- i) Give an account on carcinogenesis.
- ii) Discuss different carcinogens.

Q 2 C. Answer any one of the following:

4 M

- i) Explain the harmful effects of X rays.
- ii) Give the biological effects of nuclear radiation.

Q 3 A. Answer any two of the following:

8 M

- i) Give the functions of hypothalamus.
- ii) Draw a well labeled diagram of cerebrum. Add a note on blood brain barrier.

iii) Describe the neuroglia of the CNS.

Q 3 B. Write a short on any one of the following:

4 M

- i) Parkinson's disease
- ii) Schizophrenia

Q 4 A. Answer any two of the following:

8 M

- i) Describe the structure of larynx.
- ii) Explain the control and regulation of respiration.
- iii) Discuss the mechanism of respiration.

Q 4 B. Write a short note on any one of the following:

4 M

- i) Asthma
- ii) Emphysema

Q 5 A. Answer any two of the following:

8 M

- i) Explain formation, storage and release of thyroid hormones.
- ii) Write a note on renin, angiotensin and aldosterone system.
- iii) What are the different trophic hormones? Explain their physiological actions.

Q 5 Answer any one of the following:

4 M

- i) Differentiate between type I and type II diabetes mellitus.
- ii) Discuss the pathophysiology of Cushing's syndrome.

Q 6 A. Answer any two of the following:

8 M

- i) Discuss in detail accessory structure of eyes.
- ii) Explain physiology of equilibrium.
- iii) What are the functions of skin?

Q 6 B. Answer any one of the following:

4 M

- i) Discuss neurotransmitters and receptors autonomic nervous system.
- ii) Compare and contrast between adrenergic and cholinergic system.