

(This paper consists of 2 pages)  
First M.B.B.S. (New Scheme) (Main) Examination  
August- 2024  
PHYSIOLOGY  
Paper- I  
Time: Three Hours  
Maximum Marks: 100  
Attempt all questions in both sections  
(Use separate answer book for each section)

### Section-A

1. Fill in the blanks:

6 x 1 = 06

- a) Excessive secretion of glucocorticoids produces \_\_\_\_\_ syndrome.
- b) Number of Barr bodies seen in patients of Turner's syndrome is \_\_\_\_\_.
- c) Myelination in peripheral nervous system is produced by \_\_\_\_\_ cells.
- d) Extensor planter reflex due to upper motor neuron lesion is called as \_\_\_\_\_ sign.
- e) Middle ear is connected to throat by \_\_\_\_\_ tube.
- f) Otoliths are chemically composed of \_\_\_\_\_.

2. Choose the single, most appropriate option in the following multiple choice questions: 4 x 1 = 04

i) Temperature regulation is function of:

- a) Thalamus
- b) Hypothalamus
- c) Pons
- d) Cerebellum

ii) Deep reflexes are all except:

- a) Jaw reflex
- b) Knee reflex
- c) Biceps reflex
- d) Cremastic reflex

iii) Hearing tests includes all except:

- a) Rinne's test
- b) Weber's test
- c) Audiometry
- d) Perimetry

iv) Bitemporal Hemianopia may occur due to:

- a) Tumour of Pituitary
- b) Right optic nerve damage
- c) Left optic tract damage
- d) Damage to lateral geniculate body

3. A 35-year-old female presents in outpatient department with complaints of swelling at the front side of neck and hypersensitivity to cold. She was lethargic, dull and having dry puffy skin with non-pitting oedema. Based on the above findings, answer the following questions:
- a) What is the most probable diagnosis for this patient? 02
  - b) Describe the synthesis and regulation of secretion of the hormone responsible for the disease. 06
  - c) Discuss in detail the metabolic actions of hormone responsible for the disease. 04
  - d) Explain difference between pitting and non-pitting oedema. 03
4. Write short notes on (Any five): 5 x 2 = 10
- a) Resting membrane potential
  - b) Motor unit
  - c) Pain pathway
  - d) LH Surge
  - e) Physiological changes of pregnancy
  - f) Presbyopia
5. Explain briefly (Any three): 3 x 5 = 15
- a) Functions of oestrogen
  - b) Seminal fluid
  - c) Aldosterone
  - d) Organ of Corti

### Section-B

6. Describe functional divisions of cerebellum. Discuss various afferent and efferent connections of the cerebellum. Add a note on clinical features of cerebellar disorder. 20
7. Explain why? (Any five): 5 x 2 = 10
- a) The myelinated fibers are fast conducting as compared to unmyelinated fibers.
  - b) There is muscle weakness in Myasthenia Gravis.
  - c) Steroid therapy is tapered off gradually and not stopped suddenly.
  - d) Cryptorchidism is associated with Sterility.
  - e) There is muscle wasting in lower motor neuron lesion.
  - f) Concave lenses are used for correcting the myopic eyes.
8. Explain briefly (Any four): 4 x 5 = 20
- a) Various roles of a physician
  - b) Neuromuscular Junction
  - c) Reduced eye
  - d) Electroencephalogram (EEG)
  - e) Conditioned reflex