

Rajiv Gandhi University of Health Sciences, Karnataka

MBBS Phase – I (CBME) Degree Examination - 02-May-2023

Time: Three Hours

Max. Marks: 100 Marks

PHYSIOLOGY – PAPER-II (RS-4)

Q.P. CODE: 1023

(QP contains two pages)

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

LONG ESSAYS

2x10=20 Marks

1. List the nuclei of hypothalamus. Explain the functions of hypothalamus
2. What is normal serum calcium level? Describe the hormonal regulation of serum calcium. Add a note on Tetany

SHORT ESSAYS

8x5=40 Marks

3. Explain the transmission of impulse across the neuromuscular junction with the help of a diagram
4. Explain the physiological changes that occur in the body when exposed to high temperature
5. Name the errors of refraction. Explain its correction with the help of a diagram
6. Describe stretch reflex and explain its importance
7. Describe the functions of Basal ganglia
8. Enumerate the clinical features of Cushing's syndrome
9. Describe the uterine changes during menstrual cycle
10. A newly wed couple comes to the clinic for advice regarding contraception
 - a) What forms of contraception would the doctor advise them?
 - b) What are the other forms of contraception in females and explain their physiological basis?

SHORT ANSWERS

10x3=30 Marks

11. List the important tests for the assessment of thyroid function
12. What is a motor unit and write about recruitment of motor unit
13. Explain Wallerian degeneration
14. Draw a neat labelled diagram of organ of corti
15. List the features of decerebrate rigidity
16. Explain reflex arc with the help of a diagram
17. Draw a neat labelled diagram of taste buds. Name the primary taste sensations
18. What is Babinski's sign? Explain its clinical significance
19. List the clinical features of Upper motor neuron lesion
20. What is Klinefelter syndrome?

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Multiple Choice Questions

10x1=10 Marks

- 21 i) Nucleus Gracilis and Nucleus Cuneatus are second order neurons for
- A. Dorsal columns
 - B. Dorsal lateral tract
 - C. Ventral Spinothalamic tract
 - D. Lateral Spinothalamic tract
- 21 ii) Nicotinic A-ch receptors are found on the
- A. Presynaptic membrane
 - B. Post synaptic membrane
 - C. Motor end plate
 - D. Palisades
- 21 iii) Somatostatin is produced in the
- A. Hypothalamus
 - B. Anterior pituitary
 - C. Fundus of stomach
 - D. Alpha cells of pancreas
- 21 iv) Cortisol can cause all of the following except
- A. Inflammation to be suppressed
 - B. Fat to be used for energy
 - C. Lysosomal membranes to become unstable
 - D. The blood glucose concentration to increase
- 21 v) All are placental hormones **EXCEPT**
- A. HCS
 - B. HCG
 - C. Inhibin
 - D. Progesterone
- 22 i) What is the neurotransmitter secreted by neuron of substantia nigra
- A. Acetylcholine
 - B. Dopamine
 - C. Histamine
 - D. Gamma amino butyric acid
- 22 ii) Sustentacular cells in taste buds are
- A. Gustatory receptors
 - B. Taste receptors
 - C. Supporting cells
 - D. Taste cells
- 22 iii) The organ of Corti is located on the
- A. Basilar membrane
 - B. Reissner's membrane
 - C. Tectorial membrane
 - D. Reticular lamina

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- 22 iv) Theca cells are derived from
- A. Zona pellucida
 - B. Germinal epithelium
 - C. Stromal cells
 - D. Granulosa cells
- 22 v) Most common site of lesion to the pyramidal tracts
- A. Internal capsule
 - B. Midbrain
 - C. Pons
 - D. Medulla

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