

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**2 x 10 = 20 Marks**

1. Name the functional divisions of cerebellum. Explain the connections and functions of cerebellum
2. What is normal serum calcium level? Describe the hormones that maintain normal serum calcium. Add a note on Tetany

SHORT ESSAYS**8 x 5 = 40 Marks**

3. Describe the differences between upper motor neuron and lower motor neuron lesion
4. Explain the metabolic actions of insulin
5. Describe the actions of estrogen
6. A man aged 70 years was brought to hospital with history of difficulty in walking, stoops forwards while walking, abnormal rhythmic movements in hands were observed at rest. He shows tendency to fall forwards or backwards
 - a) What is the provisional diagnosis?
 - b) Discuss the pathophysiology behind this condition
 - c) What is the physiological basis of treatment?
7. Describe the classification of nerve fibres
8. Explain visual pathway with a neat labelled diagram
9. List the properties of synapse. Explain any two properties
10. Describe various female contraceptive methods

SHORT ANSWERS**10 x 3 = 30 Marks**

11. List the functions of limbic system
12. Explain the mechanism of action of steroid hormones
13. Explain parturition reflex
14. Mention any two neuro muscular blocking drugs and their mechanism of action
15. What is Aphasia? Discuss different types of aphasias
16. Explain the patho physiology of fever
17. Explain the types of deafness
18. Explain Papez circuit
19. What is the pathophysiology of myasthenia gravis?
20. Enumerate the heat loss mechanisms occurring in the body



Multiple Choice Questions

10 x 1 = 10 Marks

- 21 i) Kluver-Bucy syndrome is due to the lesion in which of the following structure:
A. Amygdala
B. Hippocampus
C. Hypothalamus
D. Temporal lobe
- 21 ii) Increased secretion of growth hormone after puberty leads to
A. Cretinism
B. Dwarfism
C. Acromegaly
D. Gigantism
- 21 iii) Diabetes insipidus occurs due to deficiency of
A. Growth hormone
B. Insulin
C. ADH
D. Thyroxine
- 21 iv) Blood – testis barrier is formed by:
A. Sertoli cells
B. Leydig cells
C. Epididymis
D. Vas deferens
- 21 v) Corpus luteum in pregnancy is maintained by which hormone:
A. Progesterone
B. Oestrogen
C. HCG
D. FSH
- 22 i) Which of the following triggers muscle contraction
A. Ca binding to tropomyosin
B. Ca binding to troponin C
C. ATP breakdown
D. Ca binding to troponin I
- 22 ii) Near vision is tested by
A. Snellen's chart
B. Jaeger's chart
C. Ishihara chart
D. Color vision
- 22 iii) In nerve deafness while performing Weber's test, the sound is lateralized to (heard better in):
A. Normal ear
B. Defective ear
C. Both the ears
D. None of the ear
- 22 iv) Following are the features of metabolic syndrome EXCEPT
A. Blood pressure of more than 130/85 mmHg
B. Fasting glucose of 100mg/dL or more
C. Triglycerides of more than 150 mg/dL in the blood
D. Normal BMI of 18-24 kg/m²
- 22 v) Insulin causes
A. Decreased blood glucose
B. Inhibits protein synthesis
C. Inhibits fatty acids synthesis
D. Promotes breakdown of glycogen

