

# Rajiv Gandhi University of Health Sciences, Karnataka

## MBBS Phase – I (CBME) Degree Examination - 03-Mar-2022

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 Nuclei of basal ganglia and explain functions of basal ganglia. Add a note on Parkinson's disease.
2. Name the hormones of thyroid gland and explain in detail about the functions of thyroxine. Add a note on hypothyroidism.

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

3. Compare fast versus slow muscle fibers.
4. Pain suppression system in the brain and spinal cord.
5. An adult aged 32 years comes to casualty with history of fall from tree and injury to lower back two days back. Patient is unable to move both lower limbs. On examination patient is conscious, tone in lower limb is decreased and reflexes are lost. X-ray and MRI showed transection of spinal cord at mid thoracic level.
  - a) What is the diagnosis?
  - b) What is the basis for decreased tone?
  - c) What will be the finding of Babinski sign?
6. Explain carbohydrate and fat metabolism in Type II Diabetes Mellitus.
7. Describe with neat diagram uterine changes during menstrual cycle with hormonal influence
8. Write formation, drainage of aqueous humour and add a note on glaucoma
9. Explain structure of Organ of Corti and signal transduction
10. Describe cardiovascular changes during isometric exercise.

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

11. Heat rigor
12. Explain Gonadal and sexual differentiation of foetus into male,
13. List functions of limbic system.
14. What is Aphasia and write the types
15. Types of waves in Electroencephalography.
15. Write features of Acromegaly.
16. List functions of the prostate gland.
17. List functions of middle ear.
18. Draw labelled diagram of relaxed Sarcomere.
19. Define stress and write adaptive changes.

**Multiple Choice Questions****10 x 1 = 10 Marks**

- 21 i) Repolarization in a motor nerve is due to  
A. Influx of chloride ion  
B. Efflux of potassium ion  
C. Efflux of calcium ion  
D. Influx of sodium ion
- 21 ii) Hormones which have effect on the adjacent cells are called  
A. Classical hormones  
B. Neurohormones  
C. Paracrine hormones  
D. Autocrine hormones
- 21 iii) Increased secretion of growth hormone after puberty leads to  
A. Cretinism  
B. Dwarfism  
C. Acromegaly  
D. Gigantism
- 21 iv) Diabetes Insipidus occurs due to the deficiency of  
A. Growth hormone  
B. Insulin  
C. ADH  
D. Thyroxine
- 21 v) The process of degeneration of peripheral nerve distal to the site of injury is termed  
A. Starling's degeneration  
B. Marey's degeneration  
C. Wallerian degeneration  
D. Brodmann's degeneration
- 22 i) The pain due to the inflammation of appendix felt around the umbilicus is an example for  
A. Referred pain  
B. Visceral pain  
C. Somatic pain  
D. Slow pain
- 22 ii) CSF is absorbed by  
A. Choroid plexus  
B. Central canal  
C. Arachnoid villi  
D. Third ventricle
- 22 iii) Near vision is tested by  
A. Snellen's chart  
B. Jaeger's chart  
C. Ishihara's chart  
D. Color ribbon
- 22 iv) Ovulation occurs at the end of  
A. Proliferative phase  
B. Secretory phase  
C. Midluteal phase  
D. Bleeding phase

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- 22 v) **Heat loss** center is present in
- A. Lateral pons
  - B. Medial pons
  - C. Anterior hypothalamus
  - D. Posterior hypothalamus

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