

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[MBBS 0825]**

**AUGUST 2025**

**Sub. Code: 7054**

**M.B.B.S. DEGREE EXAMINATION**  
**(For the candidates admitted from the Academic Year 2024-2025)**

**FIRST PROFESSIONAL – (CBME)**  
**PAPER II – PHYSIOLOGY**

***Q.P. Code: 527054***

**Time: Three hours**

**Maximum: 100 Marks (80 Theory + 20 MCQs)**

**Answer All Questions**

**Draw neat labeled diagrams wherever necessary**

**I. Essay:** **(1 x 10 = 10)**

1. A 25 year old healthy male tried to hold his breath as long as possible. But within a minute he was unable to hold his breath any longer and gave up.
  - a) What is breaking point? (1)
  - b) What are chemoreceptors? (1)
  - c) Explain in detail about the chemical regulation of respiration. (6)
  - d) What is Cheyne-Stokes breathing? (2)

**II. Reasoning out short notes:** **(2 x 5 = 10)**

1. Patients in hypovolemic shock have cold extremities. Explain.
2. Shape of oxygen-hemoglobin dissociation curve is sigmoid. Explain.

**III. Write short notes on:** **(10 x 6 = 60)**

1. Effect of 'g' forces on the body.
2. Surfactant.
3. Aqueous humor.
4. Triple response.
5. Hyperbaric oxygen therapy.
6. Pain pathway. Add a note on Hyperalgesia.
7. Conditioned reflex.
8. Blood-brain barrier
9. Draw a normal Lead II ECG and describe the waves, intervals and segment of ECG.
10. Autoregulation of cerebral blood flow.

\*\*\*\*\*

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[MBBS 1025]**

**OCTOBER 2025**

**Sub. Code: 7054**

**M.B.B.S. DEGREE EXAMINATION**  
**(For the candidates admitted from the Academic Year 2024-2025)**

**FIRST PROFESSIONAL – SUPPLEMENTARY (CBME)**  
**PAPER II – PHYSIOLOGY**

***Q.P. Code: 527054***

**Time: Three hours**

**Maximum: 100 Marks (80 Theory + 20 MCQs)**

**Answer All Questions**

**Draw neat labeled diagrams wherever necessary**

**I. Essay: (1 x 10 = 10)**

1. A 54 year old male was brought to the hospital with complaints of shaky hands when he tries to reach for an object and walking like an alcohol intoxicated person. But he denies drinking alcohol. On neurological examination, he has past pointing, dysdiadochokinesia and incoordination of movements.
  - a) What is the diagnosis? (1)
  - b) Mention the classification of the affected part of nervous system. (2)
  - c) Explain in detail about the connections and internal circuitry of the affected part. (5)
  - d) Mention the clinical tests done to examine the affected part of nervous system. (2)

**II. Reasoning out short notes: (2 x 5 = 10)**

1. Patients with left heart failure have difficulty in breathing in lying down posture. Why?
2. Myelinated neurons conduct nerve impulses faster. Explain.

**III. Write short notes on: (10 x 6 = 60)**

1. Conducting system of Heart.
2. Peculiarities of coronary circulation.
3. Respiratory centres.
4. Brown-Sequard syndrome.
5. Organ of Corti.
6. Types of abnormal breathing.
7. Cerebrospinal fluid. Add a note on Hydrocephalus.
8. Accommodation of vision and presbyopia.
9. Dorsal column pathway.
10. Withdrawal reflex.

\*\*\*\*\*

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[MBBS 0726]**

**JULY 2026**

**Sub. Code: 7054**

**M.B.B.S. DEGREE EXAMINATION**

**(For the candidates admitted from the Academic Year 2024-2025 & 2025-2026)**

**FIRST PROFESSIONAL – (CBME)**

**PAPER II – PHYSIOLOGY**

***Q.P. Code: 527054***

**Time: Three hours**

**Maximum: 100 Marks (80 Theory + 20 MCQs)**

**Answer All Questions**

**Draw neat labeled diagrams wherever necessary**

**I. Essay: (1 x 10 = 10)**

**(3 + 5 + 2)**

1. An 18 years old male met with a Road traffic accident and sustained brain injury involving the pons and medulla. Later he developed difficulty in breathing.
  - a) What are the various respiratory centers located in the involved area and describe the functions? (3)
  - b) Discuss the Neural regulation of respiration in detail. (5)
  - c) Add a note on Periodic Breathing. (2)

**II. Reasoning out short notes: (2 x 5 = 10)**

1. Cardiac Output increases during mild to moderate exercise. Reason Out.
2. Hypothalamus is called “Thermostat” of our body. Reason Out.

**III. Write short notes on: (10 x 6 = 60)**

1. Pacemaker Potential.
2. Stages of Shock.
3. Hamburger’s chloride shift.
4. Pulmonary Function Tests.
5. Properties of Synapse.
6. Pyramidal tract.
7. Short term memory.
8. Layers of Retina.
9. Olfactory Pathway.
10. Why is empathy important in medical practice?

\*\*\*\*\*