

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0424]

APRIL 2024

Sub. Code: 1242

**B.Sc. CRITICAL CARE TECHNOLOGY
FIRST YEAR (Regulation 2018-2019 onwards)
PAPER II - PHYSIOLOGY + BASIC PHYSICS
Q.P. Code: 801242**

Time: Three Hours

Answer All questions

Maximum: 100 Marks

I. Elaborate on: (3 x 10 = 30)

1. Define Cardiac output and Stroke volume. Describe the various factors affecting Cardiac output.
2. Name the Hormones secreted from adrenal cortex. Explain the functions of Cortisol.
3. Define Nephron. Describe the process of Urine formation.

II. Write Notes on : (8 x 5 = 40)

1. Composition and functions of bile.
2. Define ESR and mention the factors affecting it.
3. Trace the light reflex and give its clinical significance.
4. Composition, formation, circulation and functions of CSF.
5. Enumerate the active transport system across the cell membrane.
6. Define Laplace law and its physiological importance.
7. Differences between Laminar and turbulent blood flow.
8. Oxygen dissociation curve.

III. Short answers on: (10 x 3 = 30)

1. Mention the functions of Endoplasmic reticulum.
2. Mention the ECG changes in Myocardial Infarction.
3. Enumerate the functions of Platelets.
4. List the various pulmonary function tests.
5. Intracranial pressure and its regulation.
6. Spermatogenesis.
7. Define Metabolic acidosis and mention its causes.
8. Mention the functions of Parathyroid hormones.
9. List the Gas laws.
10. Storage of Oxygen and its uses in Critical Care.
