

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

[AHS 1123]

NOVEMBER 2023

Sub. Code: 5004

B.Sc. MEDICAL LABORATORY TECHNOLOGY

FIRST YEAR (Regulations 2010-2011 & 2018-2019 onwards)

PAPER IV – PHYSICS & PRINCIPLES OF INSTRUMENTATION

Q. P. Code: 725004

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

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

1. Discuss briefly about distillation apparatus with neat sketch.
2. Write an elaborate note on Electron Microscope.
3. Explain the principle and working of Refrigerator with neat diagram.

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

1. Centripetal and centrifugal forces.
2. Chemical balance with a neat sketch.
3. Thermometry and its types.
4. Spherical and Chromatic aberrations.
5. Fluorescent microscope.
6. Types of Transformers.
7. Radioactive decay series.
8. Electrolytes and their application in Medicine.

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

1. Define Viscosity.
2. What is Radioactivity and give its unit?
3. What is Specific Gravity?
4. What are the applications of Law of Thermodynamics?
5. What are physical properties of Ultrasound?
6. What is diffusion?
7. State Ohm's Law.
8. What are Diodes?
9. What is Rectification?
10. What is Magnification power?
