

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

[AHS 0424]

APRIL 2024

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

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Describe in detail, the working of Refrigerator. What are its applications in Medicine?
2. Describe in detail, the properties, problems and application of Ultrasound in Clinical field.
3. What are the three basic principles to Reduce Radiation Exposure?

II. Write notes on:

(8 x 5 = 40)

1. pH meter.
2. Scales of Temperature.
3. Centripetal and Centrifugal force.
4. Spherical and Chromosomal aberrations.
5. Simple Microscope.
6. Principle and uses of Incubator.
7. Distillation apparatus and its principle.
8. GM counter.

III. Short answers on:

(10 x 3 = 30)

1. Viscosity.
2. Thermocouple.
3. Laws of Refraction.
4. Ohm's Law.
5. Earthing.
6. Electrolysis.
7. Artificial Radioactivity.
8. Ionising Radiation.
9. Beer-Lambert's Law.
10. Blood Cell counter.
