

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

[AHS 0523]

MAY 2023

Sub. Code: 1251

**M.Sc. MEDICAL LABORATORY TECHNOLOGY
FIRST YEAR**

(Candidates admitted from 2020-2021 Batch onwards)

**PAPER II – GENERAL BIOCHEMISTRY, MEDICAL LABORATORY
TECHNOLOGY**

Q. P. Code: 281251

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on:

(2 x 20 = 40)

1. Explain the hormonal regulation of blood glucose level. List the diagnostic criteria, acute complications and chronic complications of Diabetes mellitus. Discuss the biochemical changes in diabetic keto acidosis.
2. Discuss the process of blood sample collection, transportation, pre-analytical preparation. List 10 errors and assign risk score those errors.

II. Write notes on:

(10 x 6 = 60)

1. What is Km value? Explain the Michaelis Menton equation and the implications of Km value.
- 2 Explain the chemiosmotic theory of oxidative phosphorylation.
- 3 Describe the pathways of production of special products from tyrosine by a neat flow chart.
- 4 Describe how DNA is organised to form chromosome?
- 5 Explain the Vitamin K cycle and its function.
- 6 Explain how you will prepare 1N sodium hydroxide solution?
- 7 Describe the methods for establishment of reference interval.
- 8 Describe the personnel records required in a quality management system.
- 9 Explain the principle and uses of atomic absorption spectrophotometry.
- 10 Illustrate the urea cycle with a neat diagram.
