

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

[MD 0521]

MAY 2022

Sub. Code: 2043

M.D. DEGREE EXAMINATION

BRANCH XIII – BIOCHEMISTRY

**PAPER I – PHYSICAL AND ORGANIC ASPECTS OF BIOCHEMISTRY,
INSTRUMENTATION, BIOCHEMICAL TECHNIQUES, BIOSTATISTICS**

Q.P. Code: 202043

Time: Three Hours

Maximum: 100 Marks

I. Essay Questions:

(2 x 15 = 30)

1. Describe in detail the process of automation in clinical laboratory.
2. Principle, instrumentation, application and limitation of flurometry.

II. Short notes:

(10 x 5 = 50)

1. Anticoagulants and preservatives for blood.
2. Calibration.
3. Total quality management in a laboratory.
4. Isotopes switching.
5. Eicosanoids.
6. Assessment of outliers.
7. Structure of collagen.
8. Sig sigma principle.
9. Ion selective electrodes.
10. Structure and functions of Immunoglobulins.

III. Reasoning Out:

(4 x 5 = 20)

1. Smoking causes emphysema. what is the rationale behind it?
2. Ingestion of Grape juice is a preanalytical variable (assay of drugs) Explain.
3. KCl is the commonly used inner electrolyte in Ion Selective Electrode. Why?
4. Chromatography is for both qualitative and also quantitative for ananalyte.
