

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

**[MD 1223]**

**DECEMBER 2023  
(OCTOBER 2023 EXAM SESSION)**

**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. Write an essay on principle, instrumentation technique, application and interferences of Chemiluminescence Immunoassay.
2. Essay on structure, types, biochemical functions, assay and role in diagnosis of Immunoglobins.

**II. Short notes: (10 x 5 = 50)**

1. Regression analysis.
2. Non controllable variables.
3. Urine as a Biochemical specimen.
4. Elements of Quality Assurance Program.
5. Balances in Biochemical Laboratory.
6. Nephelometry.
7. Support media in Electrophoresis.
8. Glucometers.
9. Acute phase response.
10. Apolipoproteins.

**III. Reasoning Out: (4 x 5 = 20)**

1. Heparin is not used in collecting Blood samples for PCR.
2. Fecal  $\alpha$  1 Antitrypsin assay may not be reliable for assessing Gastrointestinal Loss of Protein.
3. Arteriolated capillary blood in Blood Gas Analysis.
4. Specimen for assay of Aminolevulinic acid to be refrigerated.

\*\*\*\*\*