

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2025
(Second Semester)**

Branch – ENVIRONMENTAL SCIENCE

CLINICAL BIOCHEMISTRY

Time : Three Hours

Maximum : 75 Marks

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 15 = 75)

- 1 a Explain the collection and preservation of urine sample.
b Summarize the maintenance and handling of centrifuge.
OR
c Point out the factors that affects the results in a clinical laboratory.
d Elaborate on quality control and trouble shooting.
- 2 a Organize the three components of complete urine analysis.
b Explain the principle and methodology for estimation of serum creatinine.
OR
c Summarize the components of renal function test.
d Explain the principle and protocol for estimation of total serum protein by Lowry method.
- 3 a Write the principle and procedure for blood glucose estimation by o-toluidine method.
b Outline the albumin:globulin ratio and its significance.
OR
c Illustrate the methodology and significance of GTT.
d Summarize the methodology, normal values and clinical significance of cholesterol estimation.
- 4 a Enumerate the sources and recommended daily value for various electrolytes.
b Discuss the significance of sodium blood test.
OR
c Outline the protein patterns in serum electrophoresis.
d Explain the determination of potassium by atomic absorption spectrometry.
- 5 a Outline the clinical use of serum enzymes in liver disease.
b Discuss the clinical significance of phosphatases.
OR
c Enumerate the clinical significance of transaminases.
d Explain the clinical use of serum enzymes in myocardial infarction.

Z-Z-Z

END

