

**THE APOLLO UNIVERSITY**

**Saketa, Chittoor, AP**

**AHS- IV Semester End Examination, June, 2024**

**PAPER –II**

**EMTT 2505 - ANALYTICAL TECHNIQUES & INSTRUMENTATION-1**

**Time: 3 hours**

**Max. Marks: 60**

**Section –A (10x2=20 marks)**

**Answer all Questions**

**Write Short Notes on:**

1. General apparatus used in laboratory
2. Ultracentrifuge
3. Colorimetry
4. Principle of Flame photometry
5. Structure of porphyrin
6. Sickle cell anemia
7. Electrophoresis
8. Diseases diagnosed by electrophoresis
9. Classification of liver function tests
10. Microalbuminuria

**Section –B (5X8=40 marks)**

**Answer all Questions either A or B in 400 words each**

11. A) Give a detailed note on graduated flasks used in the laboratory.

**OR**

B) Discuss in detail the different types of balances used in laboratory.

12. A) Describe the components, types and uses of spectrophotometer.

**OR**

B) Explain the Principle, instrumentation and applications (uses) of Atomic Absorption Spectroscopy (AAS).

13. A) Present the Structure of porphyrin and functions of porphyrins and add a note on porphyrins used in cancer therapy.

**OR**

B) Classify the different types of porphyrias with defective enzymes and add a note on Acute intermittent porphyria.

**Cont....**

14. A) Elaborate the Principle of Electrophoresis and the factors affecting migration of charged particle.

**OR**

B) Describe the procedure of serum electrophoresis, draw a diagram of electrophoresis sample of protein.

15. A) Classify liver function tests with parameters and describe the obstructive jaundice markers and the haemolytic jaundice markers.

**OR**

B) Classify renal function tests with parameters and describe proteinuria and microalbuminuria.

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