

2024

**Skill Enhancement Course**  
**ANALYTICAL CLINICAL BIOCHEMISTRY**

**Paper Code : SEC0200303**

**Time : 1 Hour 30 Minutes**

**Full Marks : 30**

*(The figures in the margin indicate the full marks for the questions)*

1. Answer the following questions (any *five*) : 1×5=5
- a) Where does DNA transcription take place?
  - b) Write one function of mRNA.
  - c) Deficiency of which element causes Anaemia?
  - d) What do you mean by prosthetic group?
  - e) Why is blood red in colour?
  - f) Write two proteins found in the blood.
  - g) Name a few sources of carbohydrate.
2. Answer the following questions (any *five*) : 2×5=10
- a) What is meant by nucleoside and nucleotide? Give one example of each.
  - b) Explain the effect of pH and temperature on enzyme action.
  - c) State three differences between oil and fats.
  - d) What do you understand by essential and non-essential amino acids? Give examples.



- e) Write down the three major classes of lipids and give their examples.
- f) Why is ATP considered as the energy currency of cell?
- g) Write down the base pairs of RNA.
3. Answer the following questions (any **three**) : 5×3=15
- a) Explain the DNA replication process in detail.
- b) Explain the steps of glycolysis. Where does this process occur in a cell?
- c) Describe the primary, secondary and tertiary structures of protein.
- d) What are lipids? Classify them by citing definitions and examples.
- e) Write a short note on :
- i) Denaturation of protein
- ii) Enzyme inhibitors

