

2025

M.Sc. 1st Semester Examination
CLINICAL NUTRITION AND DIETETICS

Paper : CNDE404A1

(Biochemical and Molecular Techniques)

Full Marks : 25

Time : One Hour

The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.

Group - A

Answer any *two* questions : $2 \times 2 = 4$

1. What do you mean by central dogma in molecular biology?
2. Define two biomarkers for the detection of iron deficiency anemia.
3. Name the membranes commonly used for protein transfer in Western blotting.
4. Define nutrigenomics.

P.T.O.

(2)

Group - B

Answer any *two* questions : $4 \times 2 = 8$

5. Differentiate between qualitative and quantitative PCR.
6. Discuss the free radical scavenging role of catalase and superoxide dismutase enzyme in human.
7. Differentiate between primary and secondary antibodies used in Western blotting.
8. What is the role of SDS in SDS-PAGE? Why is blocking performed in Western blotting? $2+2$

Group - C

Answer any *one* question : $8 \times 1 = 8$

9. Why is PCR known as *in vitro* molecular technique? What is the utility of *Taq* DNA polymerase in PCR? $5+3$
10. What is genomic? How does nutrient regulate gene expression? Discuss the role of cholesterol on gene expression. $1+3+4$

Internal Assessment : 5 marks
