

2016

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

PAPER—CND-104

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Answer Q. No. 1 and any three from the rest.

1. Answer any ten of the following : 1×10

- (a) What is the charge of sodium dodecyl sulfate ?
- (b) What is post zone phenomenon ?
- (c) What is meant by optimum temperature ?
- (d) Write the name of the scientists who invented chromatography.

(Turn Over)

- (e) What is isoelectric point ?
 - (f) What do you mean by sieving effect of a gel ?
 - (g) Write the name of the scientist who got Nobel prize for his work on PCR.
 - (h) Why 'g' is important than 'r' during centrifugation ?
 - (i) What is the application of vertical and horizontal electrophoresis ?
 - (j) Write the name of a technique by which you chemically analyse metal ions.
 - (k) Write the name of a instrument which helps in the detection of water soluble vitamins.
 - (l) What is nutrigenomics ?
 - (m) Write the name of two fluorescent dyes.
 - (n) What is meant by sense and antisense primer ?
 - (o) What is the use of agarose in molecular biology ?
2. (a) State the role of SDS and TEMED in SDS-PAGE.
- (b) Write the application of SDS-PAGE.
- (c) Briefly describe the principle steps of SDS-PAGE.

4+2+4

3. (a) Mention the application of flame photometry.
- (b) Diagrammatically describe the working principle of flame photometer. 4+6

4. (a) What is Taq polymerase use ?
- (b) Discuss the basic stepwise principle of PCR with the application of PCR.
- (c) Briefly state how do you visualize the DNA imprints in a DNA gel. 2+6+2

Or

- (a) How do you prepare cell suspension of your sample before gradient centrifugation ?
- (b) Discuss diagrammatically the steps involved in differential centrifugation.
- (c) Describe schematically the functional principle of fluorescent activated cell sorters. 1+4+5
5. (a) What is the actual role of a chromogen in ELISA technique ?
- (b) What are the demerits of RNA ?
- (c) Which type of ELISA you will prefer — S-ELISA or C-ELISA ? Answer with justification.
- (d) What is interassay variable ? 3+3+2+2

6. (a) What is the basic difference between analytical chromatography and preparatory chromatography ?
- (b) Mention the application of chromatography in nutritional science.
- (c) Briefly discuss paper chromatographic technique.
- (d) State the application of nano technology.

2+2+3+3
