

2017

M.Sc.

1st Semester Examination

CLINICAL NUTRITION & DIETETICS

PAPER—CND-104

Subject Code—25

Full Marks : 40

Time : 2 Hours

The figures in the right-hand 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 Question No 1 and any three of the following.

1. Answer any ten of the following : 10×1
- (a) What do you mean by amphoteric molecule?
 - (b) What is prozone phenomenon?
 - (c) What is zwitter ion?

(Turn Over)

- (d) What is the basis of separation of DNA by electrophoresis ?
- (e) What is the minimum size for an ideal nanoparticle ?
- (f) How do you visualize DNA on an agarose gel ?
- (g) Write the full form of TEMED ?
- (h) Which photometric technique is more efficient to detect Na^+ , K^+ directly from a sample ?
- (i) Write the name of two fluorescent probes.
- (j) Write the name of an upgraded technique that efficiently identify flavonoids in a plant extract.
- (k) What is sonication ?
- (l) What is chromogen ?
- (m) What are hot and cold antigens ?
- (n) What do you mean by Cross reaction in enzyme linked immuno assay ?
- (o) Write the full forms of FIA and CLIA.

2. (a) Define prozone phenomenon.
- (b) How do you detect 'Himalaya Fantasy' by immuno electrophoresis?— State the principle of this technique.
- (c) How do you detect molecular weight of a protein by electrophoresis?
- (d) What role β -marcaptoethanol plays during protein electrophoresis? 2+3+3+2
3. (a) Diagrammatically elaborate the density gradient centrifugation.
- (b) How do you measure cell size and granularity by the implementation of an automated technique—Discuss with diagrammatic representation.
- (c) What is meant by sub cellular organells—Give example. 4+4+2
4. (a) Derive retention factor K with the proper explanation of each component of it.
- (b) Differentiate SEM and TEM with its application. 5+5

5. (a) Discuss the basic principle of ion exchange chromatography with special reference to anion and cation exchanger.
- (b) Discuss the advantages of nanotechnology for better health promotion. 6+4
6. (a) Write the principle of s-ELISA ;
- (b) Why ELISA is prefer over RIA ?
- (c) State the protocol of hormone assay through s-ELISA. 3+3+4
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