2015

M.Sc.

1st Semester Examination

CLINICAL NUTRITION AND DIETETICS

PAPER—CND-104

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.

Answer *Q.No. 1* and any *three* of the following.

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

(a) What is the size of a nanoparticle ?

(b) Write the name of a Nobel laureate for his contribution in chromatography.

(c) What is Zwitter ion ?

(d) What is Sieving effect of a gel ?

(e) What is the full form of PAGE ?

(f) Secondary electron emmision is related to which microscopy.

(g) Where you will use hanging bucket rotor ?

(h) What is bonded phase ?

(i) What is the use of titron X-100 ?

(j) What is prozone phenomenon ?

(k) Write the full form of TMRITC.

(l) What do you mean by cross reaction in ELISA ?

(m) What do you mean by primer-dimer ?

(n) Why qRTPCR is more reliable than routine PCR ?

(o) Which type of radioactive counter is used when antigen is labelled with I^{131} ?

2. (a) What do you mean by wrapping round effect of SDS ? Give your answer with justification.

(b) How acrylamide and bis-acrylamide are polymerized ?

(c) How do you detect molecular weight of unknown protein after SDS-PAGE ?

(d) What is the unit of protein and DNA used in the field of molecular biology? 2+3+3+2

3. (a) State the principle of TLC?

(b) What is the basis of choosing mobile phase with respect to stationary phase and sample used in TLC and HPLC? State with example.

(c) Discuss the advantages and disadvantages of HPLC over TLC in a comparative manner.

(d) What is retention factor? 3+2+4+1

4. (a) Briefly describe the purpose and working principle of density gardient and differential centrifugation with diagram.

(b) Discuss the principle of FACS with refernce to the role of SSC and FSC through diagramatic represenation. 5+5

5. (a) Make comparative statement between SEM and TEM.

(b) State the application of nanotechnology in the field of Nutrition.

(c) How cubosomes work? State witth diagramatic represenation.

(d) What is nanoniosome? 3+2+3+2

6. (a) Why is ELISA is preferred over RIA?

(b) "S-ELISA is more reliable than C-ELISA"—Justify the statement.

(c) What do you mean by interassay variable?

(d) Write the process of standard curve preparation in ELISA. 3+3+2+2

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