2016

M.Sc. 1st Semester Examination

CLINICAL NUTRITION & DIETETICS

PAPER—CND-102

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 cause of development of phenylketonuria (PKU) ?

(b) What do you mean by active site of an enzyme ?

(c) Give an example of transferase enzyme.

(d) What is the location of pentose phosphate path way ?

(e) What do you mean by amphoteric nature of protein ?

(f) Where glycogen is stored ?

(g) What is the unit of km ?

(h) What do you mean by deletion mutation ?

(i) What are the metabolic precursor of De novo synthesis of nucleotides ?

(j) Write the name of two mutagens.

(k) What is operon ?

(l) What is the full form of PRPP ?

(m) Name two regulators of TCA cycle in enkaryotes.

(n) Write the name of one substrate of citrate synthase.

(o) What is the full form of HGPRT ?

2. (a) Briefly describe glycohysis and its regulation.

(b) What is the importance of urea cycle is human ?

(c) What is the role of insulin in blood glucose regulation.

(3+3)+2+2

3. (a) Deduce the Michaelis Menten (M – M) equation from enzyme assay.

(b) Define Km from M – M equation. Mention is it's significance.

(c) Convert the Michelis-Menton equation into Lineweaker-Burk equation. 5+(1+2)+2

4. (a) What do you mean by competetive inhibition of an enzyme ?

(b) State the location of Line Weaver-Burk plot of non-competitive inhibition in respect to control with proper justification.

(c) What do you mean by allosteric enzyme ?

(d) Describe the variation in the enzyme kinetics of k series and M series allosteric enzyme in presence of positive and negetive modulators. 2+3+1+(2+2)

5. (a) Write the significance of pentose phosphate path way.

(b) What is the difference between transition and transversion ?

(c) Give an example of silent mutation.

(d) Write the energetics of β-oxidation of palmitic acid. 3+2+2+3

6. Write short note : $2\frac{1}{2} \times 4$

(a) Galactosemia ;

(b) Lipid storage disease ;

(c) Activation of fatty acid ;

(d) Inborn error of amino acid metabolism.
