2017

M.Sc. Part–I Examination

DIETETICS AND COMMUNITY NUTRITION MANAGEMENT

PAPER—I (Unit–2)

Full Marks : 50

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 *four* from the rest.

1. Answer any *five* of the following :   5×2

   (a) What are epimers ? Give examples.

   (b) What is zwitterion ?

   (c) What are isozymes ? Write examples.

   (d) Write the full form of TPP and UTP.

(e) What is fatty liver?

(f) Write the deficiency symptoms of zinc.

(g) What are essential fatty acids? Mention their significance.

(h) What is saponification?

2. (a) Describe the process of glycogenesis mentioning the role of glycogen synthase.

(b) Discuss critically the regulation of glycogen metabolism. 5+5

3. (a) What is Michaelis-Menten equation of enzyme kinetics? What is the significance of Km?

(b) Describe the role of pH and temperature on enzyme action. (3+3)+(2+2)

4. (a) What are ketone bodies?

(b) How ketogenesis occurs in our body?

(c) Describe the process of utilization of ketone bodies in humans. 2+4+4

5. (a) Mention the sources and RDA of calcium.

(b) Discuss the functions and deficiency symptoms of calcium in our body. (2+1)+(5+2)

6. (a) What is transamination? Explain it with an example.

(b) Describe the initiation process of prokaryotic protein synthesis.

(c) What are first class proteins? Give examples. (2+3)+3+2

7. (a) State the process of TCA cycle mentioning the catalyzing enzymes.

(b) Give the energetics of TCA cycle. 6+4

8. (a) Describe the biochemical changes that occur in different organs after taking meal.

(b) What is gluconeogenesis? 8+2

9. Write short notes on : $4 \times 2\frac{1}{2}$

(a) Conjugate and derived proteins ;

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    (b) Regulation of water balance ;

    (c) Allosteric enzymes ;

    (d) α-oxidation.

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