2015

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 is epimerism ?

(b) What is Zwitter ion ?

(c) Define coenzyme.

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

(e) What is allolesteric site of an enzyme ?

(f) What is β-oxidation of fatty acid ?

(g) Mention the symptoms of iron deficiency.

(h) Define Nucleoside with example.

2. (a) Describe the regulatory mechanism of glycogen metabolism.

(b) How is glucose produced from L-lactate in the process of gluconeogenesis ? 5+5

3. (a) Describe the effect of temperature, pH and substrate concentration on enzymatic action.

(b) Write the significance of Km. (2+2+4)+2

4. (a) What is Ketogenesis and Ketonuria ?

(b) How are Ketone bodies produced and utilized in our body ?

$\left(1\frac{1}{2}+1\frac{1}{2}\right)+(4+3)$

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) Mention the cellular site of protein synthesis.

(b) Briefly discuss the steps of initiation, elongation and termination of protein synthesis. 1+(3+3+3)

7. (a) What is transamination ? Describe the mechanism of the process.

(b) Mention the names of essential amino acid.

(c) What is ureotelic animals ? (2+5)+2+1

8. (a) Describe the pathway in which carbohydrate, protein and fat are integrated and ultimately produce energy.

(b) Give a brief estimate of energy production from a glucose molecule by the process of glycolysis and TCA cycle. 7+3

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

(a) Biological value of protein ;

(b) Lipoproteins of Plasma ;

(c) Competitive inhibition ;

(d) Isoenzymes.

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