DDE/I/I/U-2/13(DCNM)

M.Sc. Part-I Examination, 2013

DIETETICS AND COMMUNITY NUTRITION MANAGEMENT

PAPER – I (Unit-2)

Full Marks : 50

Time : 2 hours

Answer **Q. No. 1** and any **four** from the rest

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

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

(*a*) What do you mean by amylose and amylopectin ?

(*b*) State the difference between L-type and M-type of pyruvate kinase.

(*c*) Write the full form of IP_3 and DAG.

(*d*) Define Glucogenic-Ketogenic amino acid with one example.

(*e*) Define NPU.

(*f*) Define omega oxidation of fatty acid.

(*g*) Write any four symptoms of zinc deficiency.

(*h*) Define allosteric enzyme with example.

2. (*a*) Define Glycogenesis.

(*b*) Describe the regulation of glycogenesis in brief.

(*c*) State the neoglucogenesis process from Glycerol. 2 + 5 + 3

3. (*a*) Describe in short about 'GLUT' from the view point of blood glucose homeostasis.

(*b*) Discuss the role of insulin and glucagon on blood glucose homeostasis. 4 + (3 + 3)

4. (*a*) What do you mean by amino acid pool ?

(*b*) State in brief about inputs and outputs of amino acid pool.

(*c*) Define transdeamination with example.

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

5. (*a*) Describe the elongation of protein chain in translation process in eukaryotes.

(*b*) "Antibiotics interfere the translation process" – Justify the statement citing any two examples. 6 + (2 + 2)

6. (*a*) Discuss in brief about the role of fatty acid synthetase in lipogenesis process.

(*b*) Why carbohydrate deficiency in diet results in ketosis in our body ? 6 + 4

7. (*a*) State the requirement of calcium in growing child and pregnant mother.

(*b*) Discuss the role of Vit-D_3 on calcium metabolism.

(*c*) State in brief about the role of Vit-C on iron absorbtion. $\left(1\frac{1}{2}+1\frac{1}{2}\right)+5+2$

8. (*a*) Discuss the role of hypothalamus on water metabolism.

(*b*) "Kidney plays a vital role on water homeostasis of our body" – Justify the statement. 5 + 5

9. (*a*) Write the differences between competitive and non-competitive inhibition of enzyme.

(*b*) State the role of pH on enzyme activity.

(*c*) What do you mean by zero order and Ist-order of enzyme kinetics ? 5 + 2 + 3