2013

M.Sc.

2nd Semester Examination

BIOCHEMISTRY

PAPER—BIC-203

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.

Illustrate the answers wherever necessary.

Group – A

1. Answer any five questions from the following : 2×5

(a) Define 'salvage' pathway of purine metabolism.

(b) What is phenylketonuria?

(c) Write short note in haemolytic anemia.

(d) Mention the role of AST and ALT.
(e) What is nitrogen balance? How it is important in protein turnover?

(f) What is the utility of anti-folate drug? How does it work?

(g) Why pancreatic juice is necessary for intestinal digestion?

(h) Write the function of prostaglandin.

**Group – B**

Answer any two questions from the following: 5×2

2. Write a brief note in pyruvate dehydrogenase complex with suitable diagram. 5

3. Write a short note on ubiquitination of protein. Discuss its mechanism and consequences. 5

4. What are the functions of transketolase and transaldolase? 5

5. How and where chylomicron is formed? What is α-limit dextrin? 3+2
**Group – C**

Answer any two questions from the following: 2×10

6. (i) Write the important regulatory steps of β-oxidation of palmitate.

(ii) Briefly describe the functional difference between hexokinase and glucokinase. 6+4

7. (i) Write the important steps and regulations of energy production from non-carbohydrate sources.

(ii) What is the regulatory differences between anaerobic oxidation of glucose and fructose? 7+3

8. (i) Write the role of liver in lipid transport and storage.

(ii) Mention the role of insulin in lipid metabolism and mobilization. 5+5

9. What is redox potential? Briefly discuss the chemiosmotic theory of oxidative phosphorylation. 2+8