

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.

(Turn Over)

- (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
-