

2013

M.Sc.

2nd Semester Examination

BIOCHEMISTRY

PAPER—BIC-202

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) Why is enzyme called a homogeneous biocatalyst?
 - (b) Write the name of a deficient vitamin responsible for sideroblastic anemia.

(Turn Over)

- (c) State the names of the enzymes which are having the following co-factors :
- (i) Cu^{2+} , (ii) Ni^{2+} , (iii) Fe^{2+} or Fe^{3+} , (iv) Mg^{2+} .
- (d) Write down the roles of a selenium in human body.
- (e) What do you mean by vitamin S and vitamin U? Mention their roles in human body.
- (f) What is BMR? Mention its significance.
- (g) State the importance of ATPase Transporter.
- (h) Mention the nutritional roles of calcium and magnesium in our body.

Group - B

Answer any *two* questions from the following : 5×2

2. Briefly discuss about the different types of interactions between substrate and enzyme to catalyse an enzymatic reaction.
3. Briefly state how prosthetic groups regulate enzyme activity.

4. Briefly discuss the different aspects of anthropometric measurement to assess nutritional status.
5. What is the molecular basis of the biological role of vitamin A?

Group - C

Answer any *two* questions from the following : 10×2

6. What do you mean by 'Feed back inhibition'? Explain with proper example, mention the kinetic properties of the activity of allosteric enzyme. 5+5
7. Describe the role of different vegetables containing goiterogens influencing iodine metabolism.
8. What do you mean by antivitamins? Give example. How does vitamin D transform to active form from inactive form of Skin? State the role of vitamin C as electron donor in enzymatic function. 2+4+4
9. Write short notes on : 5+5
 - (i) Role of amino acid in suppression of pain.
 - (ii) Calorigenic effect of food.