2019

BIOCHEMISTRY

Full Marks : 80

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

Group-A

I. Essay Type Questions : *(Answer **any two)***
    10×2=20

    1. Describe the structure of a typical cell with a neat labeled diagram. Add a note on structure and functions of the various organelles.

    2. What is Urea cycle ? Describe the synthesis of urea in the body.

    3. Describe in details, the steps of citric acid cycle. Why is it called as common metabolic pathway ?

Group-B

II. Answer *any eight* questions :   5×8=40

1. Briefly describe transfer RNA (tRNA) structure.

2. Describe the factors affecting the enzyme action.

3. Enumerate Renal Function Test.

4. Define hormone. Discuss the mechanism of hormone action.

5. What is Collagen ? Discuss its role in our body.

6. Write short notes on : *(any two)*

   (a) Atherosclerosis

   (b) Glycosaminoglycans

   (c) Anion gap.

7. Define buffer. Describe about the different buffer systems in the body.

8. Enumerate the functions of :

   (a) Iron and

   (b) Calcium along with their deficiency disorders.

9. What is the role of ADH and thirst center in the regulation of water balance ?

10. Describe the contractile elements in muscle.

Group-C

III. Answer *all* the questions :   2×10=20

1. What is Recommended Dietary Allowances ?

2. What are essential fatty acids ? Give examples.

3. In which direction DNA synthesis (replication) occurs ? Name the nitrogenous base present only in DNA and not in RNA.

4. What is Lactose intolerance ?

5. Classify Vitamins according to their solubility.

6. Define Osmolarity.

7. What is Glycosuria ?

8. Give the equation most commonly employed in enzyme kinetics with regard to K_m.

9. The protein digestion starts form ————— and ends at —————.

10. What is Cori cycle ?

———————