

APRIL 2018

1709413/PBYM22C

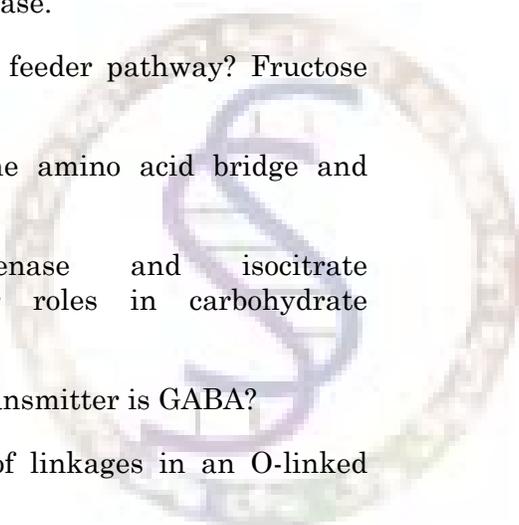
Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer any TEN questions.

Each question carries 1 Mark.

1. Give the role of malate synthase in the glyoxalate cycle.
 2. What are gluconeogenic aminoacids?
 3. Give the reaction catalysed by orotate phosphoribosyl transferase.
 4. What do you mean by feeder pathway? Fructose enters at which point?
 5. Where do you find the amino acid bridge and pentaglycine link?
 6. Isocitrate dehydrogenase and isocitrate lyase-what are their roles in carbohydrate metabolism?
 7. What type of a neurotransmitter is GABA?
 8. Give the three types of linkages in an O-linked glycoprotein.
- 

9. Does calcium interfere with absorption of iron? Is that a serious issue?
10. What is ATP/ADP ratio?
11. What is mannose triad?
12. Which is the site of urea synthesis?

PART B — (5 × 5 = 25 marks)

Answer any FIVE questions:

Each question carries 5 Marks.

13. Write briefly about the biosynthesis of heme.
14. Give a brief account on glycolytic pathway and its regulation.
15. Brief about the action of inhibitors of nucleotide biosynthesis.
16. Give the mechanism of Pyruvate dehydrogenase complex.
17. Write briefly the regulation of glycogen biosynthesis.
18. Discuss the coenzymatic role of PLP.
19. Describe the uronic acid pathway.

PART C — (4 × 10 = 40 marks)

Answer any FOUR questions:

Each question carries 10 Marks.

20. Describe the *de novo* synthesis of purine nucleotides.
21. Outline the integrated pathways of TCA cycle, glycolysis and gluconeogenesis.
22. Write the details of three stages of pentose phosphate pathway. Schematically represent the relationship between pentose phosphate pathway and glycolysis.
23. Give a detailed account on metabolism of sodium and potassium.
24. (a) Give an account on regulation of urea cycle.
(b) Give a detailed note on disorders associated with dysregulated urea cycle.
25. Give in detail the conversion of one carbon unit on tetrahydrofolate.