

61633

Sixth Semester B.Sc. Degree Examination, September/October 2021

(CBCS Scheme)

Paper VII — BIOCHEMISTRY

Time : 3 Hours]

[Max. Marks : 70

Instructions to Candidates :

- 1) The Question Paper has two Parts : Part A and Part B.
- 2) Answer any **EIGHT** questions from Part A and any **NINE** questions from Part B.

PART – A

Answer any **EIGHT** of the following questions. Each question carries **2** marks :

(8 × 2 = 16)

1. Write the phases of metabolism.
2. How lactose enters into glycolysis?
3. Define ketosis.
4. Write the structure and function of carnitine.
5. What is decarboxylation reaction? Give an example.
6. Give any two significance of urea cycle.
7. How is GMP synthesized from IMP?
8. Write the sources of carbon and nitrogen required for pyrimidine ring system.
9. Write the structure of cholesterol.
10. Mention any two bacterial photosynthetic pigments.
11. Mention the role of nif gene in biological nitrogen fixation.
12. List out any two significance of Nitrogen cycle.



61633

PART – B

Answer any **NINE** of the following questions. Each question carries **6** marks :

(9 × 6 = 54)

13. (a) Write the reactions of oxidative phase of pentose phosphate pathway.
(b) Mention the components of PDC. **(4 + 2)**
14. (a) Discuss the reactions of gluconeogenesis.
(b) State the energetic of TCA cycle. **(4 + 2)**
15. Discuss in detail about glycogen metabolism. **(6)**
16. (a) Outline the reactions of cholesterol biosynthesis.
(b) Write the functional significance of fatty acid synthase complex. **(4 + 2)**
17. (a) Explain deamination reactions with suitable example.
(b) List out the characteristic features of AKU. **(4 + 2)**
18. (a) Write the reactions catalysed by SGOT and SGPT.
(b) How glycine is synthesized from serine? **(4 + 2)**
19. (a) Explain the mitochondrial reactions of urea cycle.
(b) Distinguish between Photosystem I and Photosystem II. **(4 + 2)**
20. (a) Outline the biosynthesis of pyrimidine nucleotides.
(b) Define photosynthesis. **(4 + 2)**
21. (a) Explain the light reactions of photosynthesis.
(b) What is HSK pathway? **(4 + 2)**
22. (a) Explain the Glycogen Storage Disorders.
(b) What is Diabetes Mellitus? **(4 + 2)**

61633

23. (a) Explain the nitrogen fixation and mention its importance.
(b) Mention the components of nitrogenase complex. (4 + 2)
24. (a) Explain the reactions of Cori cycle.
(b) What is meant by Gout? (4 + 2)
25. (a) Explain the amphibolic role of TCA cycle.
(b) Write a note on regulation of blood sugar level. (4 + 2)
-

