

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017**Fourth Semester****Complementary Course—BIOCHEMISTRY METABOLISM-2**

(Common for all programmes having Biochemistry as a Complementary Subject)

[2013 Admission onwards]

Time : Three Hours

Maximum Marks : 60

Part A (Short Answer Questions)

Answer all questions.

Each question carries 1 mark.

1. Triglycerides. ✓
2. Synonym of Mo-Fe protein in N₂ fixation. ✓
3. Nucleoside.
4. Amphibolic reactions.
5. Peptide bonds. ✓
6. Oxydation. ✓
7. Exon. ✓
8. hn RNA. ✓

(8 × 1 = 8)

Part B (Brief Answers)

Answer any six questions.

Each question carries 2 marks.

9. Decarboxylation of amino acids.
10. Central dogma vs. Reverse transcription.
11. Redox potential.
12. Urea cycle and its significance. ✓
13. Degeneracy of genetic code. ✓
14. Types of RNA. ✓
15. Mechanism of action of insulin. ✓
16. mRNA capping.
17. Ribosomal RNA. ✓
18. DNA polymerases. ✓

(6 × 2 = 12)

Turn over

Part C (Short Essays)

Answer any four questions.

Each question carries 4 marks.

19. Explain the post transcriptional modifications of mRNA with its functional needs. ✓
20. Explain in detail the process of β oxidation and energy yield. ✓
21. Specify the importance of micronutrients with their physiological functions. ✓
22. Explain cytoplasmic biosynthesis of fatty acids. ✓
23. Electron transport chain.
24. Explain biosynthesis of cholesterol.

(4 × 4 = 16)

Part D (Essays)

Answer any two questions.

Each question carries 12 marks.

25. Explain in detail the sources, functions and deficiency disorders of important vitamins.
26. Explain the biochemical reactions, with energy spent, involved in biological N_2 fixation. ✓
27. Explain in detail the protein synthesis process in eukaryotes.
28. Explain chemical reactions involved in complete oxidation of glucose under aerobic conditions. ✓

(2 × 12 = 24)