MAR IVANIOS COLLEGE (AUTONOMOUS)
THIRUVANANTHAPURAM

Reg. No. :…… **Name :……**

Fourth Semester Career Related B.Sc. Degree Examination, June 2016
First Degree Programme under CBCSS
Complementary Course: Biochemistry – IV (for Botany and Biotechnology)
AUBB431: Metabolism

Time: **3** Hours Max. Marks: **80**

SECTION – A

*Answer **ALL t**he following each in a word or as short notes.*

1. RNA polymerase
2. Name an unsaturated fatty acid.
3. Rho factor
4. ATP
5. Essential fatty acid
6. Deamination
7. Redox potential
8. Zymogen
9. DNA polymerases
10. Peptidydyl transferase

(10 × 1 = 10 Marks)

SECTION – B

*Answer any **EIGHT** questions, not exceeding one paragraph.*

11. Structure of tRNA.
12. Fate of pyruvate.
13. Enzymes in digestion of carbohydrate.
14. Ketone bodies.

15. Any four functions of phospholipids.
16. Uncoupling agents with its action.
17. What are High energy molecules ?
18. ATP Synthase.
19. Proteins in DNA replication.
20. Nucleosome.
21. Replication fork.
22. Substrate level phosphorylation.

(8 × 2 = 16 Marks)

SECTION – C

*Short essay type : Answer any **SIX** questions.*

23. Write about chemiosmotic hypothesis.
24. Oxidative phosphorylation.
25. Illustrate fatty acid biosynthesis and its regulation.
26. What is genetic code ? What are the properties of genetic code ?
27. Describe the structure of DNA.
28. Describe the regulation of glycolysis.
29. Explain Cori cycle.
30. Functions of bile acids.
31. Synthesis of triglyceride.

(6 × 4 = 24 Marks)

SECTION – D

*Long essay type : Answer any **TWO** questions.*

32. What is Pentose Phospate Pathway ? Write about the pathway, regulation and biological significance.
33. Explain the metabolism of glycogen with special reference to its regulation.
34. Describe beta oxidation, ATP yield and its regulation.
35. Describe about the protein synthesis in prokaryotes.

(2 × 15 = 30 Marks)

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