

Faculty of Sciences

B. Sc (Biotechnology) I-Year, CBCS –II Semester

Regular Examinations –June, 2023

PAPER: Biological Chemistry and Microbiology

Time: 3 Hours

Max Marks: 80

Section-A

- I. Answer any *eight* of the following questions (8x4=32 Marks)
1. Lactose
 2. Triacylglycerides
 3. Classification of enzymes
 4. Substrate level phosphorylation in glycolysis
 5. Glyoxalate cycle
 6. Oxidative deamination of amino acids
 7. Tuberculosis
 8. Structure of micro-algae
 9. Economical importance of fungi
 10. Laminar-Air-Flow
 11. Nutritional groups in bacteria
 12. Synchronous culture

Section-B

- II. Answer the following questions (4x12=48 Marks)
- 13.(a) Explain various levels of protein structure.
(OR)
(b) Outline the Watson & crick model of DNA structure.
- 14.(a) Explain in detail all the reactions of TCA cycle. Mention its bioenergetics.
(OR)
(b) Write about B-oxidation of fatty acids. Calculate the ATPs generated by palmitic acid during its complete oxidation.
- 15.(a) Explain the principle of Electron Microscopy. Differentiate between Transmission Electron Microscope & Scanning Electron Microscope.
(OR)
(b) Describe the ultra structure of a bacterial cell.
- 16.(a) What are pure cultures? Explain various methods employed for isolation of pure cultures.
(OR)
(b) Define disinfection. Write a detailed account of various chemical disinfectants.
