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21MBL1C3L

M.Sc. I Semester Degree Examination, April/May - 2023 MICROBIOLOGY

MB DSC 3: Microbial Biochemistry and Physiology

Time: 3 Hours Maximum Marks: 70 Note: Answer any five of the following questions with question no. 1 (Q.1) compulsory, each question carries **equal** marks. 1. Describe the structure and functions of Lipids. 14 2. Write an account on TCA cycle and its regulation. 14 3. Explain the biosynthesis and degradation of purines. 14 Discuss classification of microbes based on Carbon sources. 4. 14 5. Describe the bioluminescence in bacteria. 14 6. Discuss structure and properties of water molecule. 5 (a) (b) Explain Gluconeogenesis. 5 (c) Write an account on Electron carriers. 4 **7**. Briefly discuss repairing of damaged DNA. (a) 7 (b) Explain Calvin's cycle. 7 8. (a) Write an account on buffers and its uses. 5 Explain HMP pathway. (b) 5 (c) What is heat shock response?

