BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI (END SEMESTER EXAMINATION)

(END SEMESTER EXAMINATION) CLASS: **BHMCT SEMESTER: I** BRANCH: **HMCT** SESSION: MO/18 SUBJECT: HM101 FOOD SCIENCE NUTRITION TIME: **FULL MARKS: 50** 3 HOURS **INSTRUCTIONS:** 1. The question paper contains 5 questions each of 10 marks and total 50 marks. 2. Attempt all questions. 3. The missing data, if any, may be assumed suitably. 4. Before attempting the question paper, be sure that you have got the correct question paper. 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall. ______ Q.1(a) Describe the glycolysis process. [5] Q.1(b) Explain isomerism in sugars and draw structure of C-2 and C-4 epimers. [5] Q.2(a) Explain primary and quaternary structure of proteins. [5] Q.2(b) Describe the aspects which determine tertiary structure of protein. [5] Q.3(a) Illustrate the chemical reactions of triacylglycerol. [5] Q.3(b) Outline the steps of Ketogenesis. [5] Q.4(a) Explain the characteristics of water- and fat-soluble vitamins. [5] Q.4(b) Point out the role of minerals. [5]

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Q.5(b) Distinguish between gram positive and gram-negative bacteria with label diagrams.

Q.5(a) Describe the growth cycle of bacteria.