

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2016

B.Tech. VI<sup>th</sup> Semester

COURSE CODE: 16B11BT611

MAX. MARKS: 15

COURSE NAME: Downstream Processing

COURSE CREDITS: 04

MAX. TIME: 1 HRS

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Please give answers of each question to the point.*

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1. Why preservation of an industrially important microorganism is required? [1]
2. Whether the external riser in airlift bioreactor is more efficient in heat transfer over the internal riser? Justify your answer with suitable figures. [3]
3. What do you understand by Catabolite Repression? Explain with suitable example and diagram. [3]
4. For enhancing the product yield through strain improvement program, the understanding of biosynthetic pathway of the desired products and its regulation is must.
  - a) How attenuation is different from repression in Trp operon? [2]
  - b) How glutamate production can be increased by changing a single media component? [1]
  - c) How the presence of rapidly utilizable nitrogen sources like ammonia in fermentation medium affects the productivity of secondary metabolites? [1]
  - d) How a cumulative feedback control is different from cooperative feedback control? [2]
5. How will you screen an auxotroph using Lederberg's Replica Plating Method [2]