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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T-2 EXAMINATIONS-OCTOBER 2019

B.Tech (BT), VIIth Semester

COURSE CODE: 15M11BT431

MAX. MARKS: 25

COURSE NAME: Traditional Bioprocesses and their upscaling

COURSE CREDITS: 3

MAX. TIME: 1.5 h

Note: All questions are compulsory.

- 1) Write about the following one's (CO I & CO II) (2 x 2.5 = 5 M)
- (a) Strategies used for minimization of byproducts accumulation in Mab's production
 - (b) Comparison of commonly used modes of feeding based on product yield and process economics related to antibody production
- 2) Discuss in detail about the vinegar production by "Slow Process", "Quick process" and "Fringe's Process"? (CO III) (5 M)
- 3) Write in detail about the ascorbic acid production by Reichstein process and Two-stage fermentation process? What are advantages, problems and problem remedies associated with the microbial fermentation for amino acids production? (CO III) (5 M)
- 4) Write about the following one's (CO II & CO III) (1 x 5 = 5 M)
- (a) Production strains of Kanamycin and Bacitracin
 - (b) How the β -lactam structure is formed in case of β -lactam antibiotics
 - (c) Give any two examples for sugar alcohols
 - (d) Mention the names of any two approaches used to tackle the "Apoptosis" problem in mammalian cell culture systems
 - (e) Mention the names of two therapeutic enzymes used on "Cystic Fibrosis" treatment
- 5) Write about the different features of protein therapeutics "Glycosidases" & "Lactic acid bacteria"? Discuss about the direct & indirect microbial production of xylitol? (CO III & IV) (5M)

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