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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

T2 EXAMINATION- MARCH 2019

BTDD, X Semester & PhD

COURSE CODE: 14M11BT211

MAX. MARKS: 25

COURSE NAME: Industrial Biotechnology

COURSE CREDITS: 03

MAX. TIME: 1.5 h

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. Write in detail about the important characteristics of microbes used in Industrial Biotechnology? What is G+C ratio and how it is used to classify the Gram+ve bacteria?  
(CO II) (4 M)
2. How the design criteria of pharmaceutical product are differs with the bulk product? Mention the three activities and its purpose (which information) usually done to characterize the produced Mab?  
(CO III) (5 M)
3. Write about the different stages of DSP? Write the formula used to calculate the degree of cell disruption? Mention the names of chromatographies used to separate the proteins that containing aromatic amino acids and histidine?  
(CO III) (5 M)
4. With a neat sketch explain the different steps and its purpose utilized in Mab's recovery process? What are the positive attributes of "Protein A Chromatography" by which its considered as a primary chromatography rather than IEC or HIC? (CO III & CO IV) (5 M)
5. What do you know about the extremophile "*Deinococcus Radiodurans*"? Write about the "Compatible solute" and "Salt-In" strategies adopted by halophiles to thrive in saline conditions? What are reasons behind the less-cost associated PHA's production by halophiles?  
(CO IV) (6 M)

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