BACHELOR OF TECHNOLOGY (C.B.C.S.) (2020 COURSE)
B.Tech.Sem - V CHEMICAL : WINTER- 2022
SUBJECT : BIOCHEMICAL ENGINEERING

Day : Monday
Time : 02:30 PM-05:30 PM

Date : 12/12/2022
W-24450-2022
Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Draw neat labelled diagrams **WHEREVER** necessary.

Q.1 Give bio-energetic processes with example **(10)**

OR

Q.1 Illustrate fed batch culture with neat diagram. Give advantages and disadvantages. **(10)**

Q.2 Elaborate Michaelis–Menten kinetics for enzyme catalyzed conditions. **(10)**

OR

Q.2 Discuss enzyme inhibited kinetics for all conditions. **(10)**

Q.3 Discuss substrate limited growth kinetics. **(10)**

OR

Q.3 What is mean by quantifying cell concentration? Give details with example. **(10)**

Q.4 Draw schematic of fermenter with all parts. Give functions of each part. **(10)**

OR

Q.4 Illustrate photo-bio reactor operation in detail. **(10)**

Q.5 Discuss one case study related to use of microbial reactor in detail. **(10)**

OR

Q.5 Which are the microorganisms involved in the industrial product formation? Illustrate with examples. **(10)**

Q.6 Elaborate various steps involved in downstream processing in purification of biosynthetic products. **(10)**

OR

Q.6 Give details of cell disruption methods for release of intracellular products. **(10)**

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