

Register Number.....

B.TECH. DEGREE EXAMINATIONS: NOVEMBER 2009

Third Semester

BIOTECHNOLOGY

U07BT301 Basic Industrial Biotechnology

Time: Three Hours

Maximum Marks: 100

Answer ALL the Questions:-

PART A (10 x 1 = 10 Marks)

1. Isolation of high yielding species from the natural sources is called _____
a) Purification b) screening c) subculture d) separation
2. _____ is the aeration device
a) baffles b) sparger c) cooling coil
3. _____ is an important growth factor in glutamic acid production.
a) Thiamine b) Biotin c) Calcium Pantothenate d) Glucose
4. _____ is the most frequently employed bacteria for alcohol production.
a) Zymomonas mobilis b) Clostridium acetobutylicum
c) Bacillus Subtilis d) Corynebacterium sps.
5. Macrolides are _____
a) Organic acids b) Antibiotics with large lactone rings
c) antibiotics with β -lactam ring d) Solvents
6. The Optimum temperature for the production of streptomycin is _____
a) 5-10°C b) 27-30°C c) 50-60°C d) 15-20°C
7. Alkaline proteases have stability in the pH range of _____
a) 3-5 b) 9-11 c) 1-2 d) 2-4
8. Rennin is _____
a) An antibiotic b) An amionacid
c) Biopolymer d) Milk coagulating enzyme
9. Gibberellins are _____
a) phytohormones b) An antibiotic c) Biopolymer d) An amionacid
10. Insulin was first isolated from _____
a) Pig pancreas b) calf pancreas c) mice cells d) chicken cells

PART B (10 x 2 = 20 Marks)

11. Define Bioreactor
12. Describe the steps involved in fermentation
13. List out the organisms used for the production of lactic acid.
14. Describe the steps in biosynthesis of glutamic acid
15. Short notes on large scale production of Vit.B12.
16. Give Brief note on production of erythromycin
17. Brief account on α -amylases.
18. List out the steps involved in cheese production.
19. Give 4 examples for phytohormones
20. Give an outline of insulin production

PART C (5 x 14 = 70 Marks)

21. a) Explain about the designing of fermenter in detail
(OR)
b) Write an essay on industrial fermentation process
22. a) Summarize the production & purification of citric acid
(OR)
b) Give a detailed account on ethanol production
23. a) Describe the production & purification of penicillin in detail
(OR)
b) Brief note on the following
i) Streptomycin production (7) ii) cephalosporin production(7)
24. a) Explain about the production & Purification of protease
(OR)
b) Write an essay on the production of SCP.
25. a) Narrate the steps involved in the production of recombinant protein
(OR)
b) List out the products of animal cell culture and explain in detail.
