

D 6757

(Pages : 2)

Name.....

Reg. No.....

THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2016

(CUCSS)

General Biotechnology

GB 3C 2 – BIOPROCESS TECHNOLOGY

Time : Three Hours

Maximum : 36 Weightage

Section A

*Answer **all** questions.*

Each question carries a weightage of 1.

- | | |
|-------------------------------|---------------------------------------|
| 1. Surface fermentation. | 2. Fluidised bed reactor. |
| 3. SCP. | 4. Monod equation. |
| 5. Site directed mutagenesis. | 6. Autoregulation. |
| 7. Corn steep liquor. | 8. Newtonian and Non-Newtonian Fluid. |
| 9. Impellers. | 10. Counter current extraction. |

(10 x 1 = 10 weightage)

Section B

*Answer any **seven** questions.*

Each question carries a weightage of 2.

11. Different type of agitators used in fermenters.
12. Discuss the role of computers in bioprocess.
13. What are Pneumatic and hydrodynamic fermenters?
14. What are Reynolds number and Power number?
15. Application of whole cell immobilization.
16. Explain microbial growth kinetics in continuous culture.
17. Maintenance and preservation methods for industrially important microbes.
18. Explain inoculum build-up in bioprocess.
19. Explain fermentative production of Glutamic acid.
20. What is enrichment culture? Explain its application.

(7 x 2 = 14 weightage)

Turn over

Section C

Answer any two questions.

Each question carries a weightage of 6.

21. Discuss in detail different downstream processing involved in industrial fermentation.
22. Explain various strain improvement strategies employed for industrial strain.
23. Explain the parts of a typical fermenter with the help of suitable sketch and discuss the important parameters under consideration in a fermenter design.

(2 x 6 = 12 weightage)