

M.Sc.(Microbiology) (CBCS Pattern) Semester-III
PSMBT-11 - Paper-III : Bioprocess Technology

P. Pages : 1

Time : Three Hours



GUG/W/24/11293

Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

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| 1. | Describe the Monod model for growth kinetics. | 16 |
| OR | | |
| a) | Explain working mechanism of air lift reactor. | 8 |
| b) | Explain mechanism and process of Batch fermentation. | 8 |
| 2. | Explain the solvent extraction method of bioproduct purification. | 16 |
| OR | | |
| a) | Role of affinity chromatography in purification of bioproduct. | 8 |
| b) | Explain Drying technique and its application in fermentation industries. | 8 |
| 3. | Explain ethanol production from cellulosic and starchy waste by using <u>S. Cerevisiae</u> . | 16 |
| OR | | |
| a) | Write a note on biopolymer <u>Xanthan</u> . | 8 |
| b) | Write a note on bio-preservatives <u>L. Sakei</u> | 8 |
| 4. | Describe the process and applications of Glucose oxidase. | 16 |
| OR | | |
| a) | Write an account on – Riboflavin production. | 8 |
| b) | Explain the industrial production of carotenoids | 8 |
| 5. | Write a note on – | |
| a) | Fluidized bed reactor | 4 |
| b) | Fractional distillation. | 4 |
| c) | r-DNA technology for ethanol production. | 4 |
| d) | Applications of Gibberellins. | 4 |
