

Total number of printed pages-3

53 (FPT 712) FRTC

2013

(December)

FERMENTATION TECHNOLOGY

Paper : FPT 712

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions out of seven given.

1. (a) How can you define fermentation ? Explain the major sources of Fermentation Media and their role in growth of Micro-organism. 3+12

(b) What is solid state fermentation ? Enlist its advantages ? 5

2. Write notes on (**any four**) of the following : 4×5=20

(a) Glycolysis

(b) Anaerobic Fermentation

Contd.

- (c) Media Formulation
- (d) Aerobic Fermentation
- (e) L-Lysine production
- (f) Biosensor
3. (a) Explain the Fed batch mode of operation. How Fed batch mode is better than a batch mode when growth limiting substance is a part of media ? 6+4
- (b) What is submerged fermentation ? Enlist its advantages and disadvantages. 4+6
4. Distinguish between (*any two*) of following : 10×2
- (a) Alcoholic Fermentation and Lactic acid fermentation.
- (b) Batch fermentation and Continuous fermentation.
- (c) Bubble column bioreactors and Packed towers bioreactors.
5. (a) Explain in detail the commercial production of Beer. 10

- (b) Explain in detail the commercial production of wine. 10
6. Explain in details about the various steps involved in the production of Antibiotics. 20
7. (a) Explore the utilization of microorganisms in food industries. 10
- (b) Explain principle and application of spray drier in food industry. 10