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NB—24—2023

FACULTY OF SCIENCE

B.Sc. (Third Year) (Fifth Semester) EXAMINATION

NOVEMBER/DECEMBER, 2023

(New Pattern)

BIOTECHNOLOGY

(Bioprocess Technology)

(Thursday, 7-12-2023)

Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) Attempt all questions.

(ii) All questions carry equal marks.

(iii) Draw well labelled diagrams wherever necessary.

1. Define fermenter. Describe design, operation and components of fermenter. 15

Or

Write notes on :

(i) Surface treatment 8

(ii) Welding. 7

P.T.O.

WT

(2)

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2. Describe in detail batch and continuous sterilization : 15

Or

Write notes on :

(i) Air sterilization 8

(ii) Composition of fermentation media. 7

3. Describe microbial growth kinetics in continuous culture. 15

Or

(i) Describe strategies of fermentation control. 8

(ii) Describe measurement of cell growth. 7

4. Describe GMP. 15

Or

(i) Describe SOP. 8

(ii) Describe foam and its control. 7

5. Write short notes on (any *three*) : 15

(i) QC

(ii) Scale-up

(iii) Fed-batch

(iv) Depth filters

(v) Oxygen uptake rate.

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