

17649

11920

3 Hours / 100 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **20****
- a) Define fermentation with reaction.
 - b) Draw a neat sketch of a distillation apparatus.
 - c) List the name of Nutrients required for yeast.
 - d) Describe the Morphology of yeast.
 - e) What is the difference between Vodka and Brandy?
 - f) Explain the yeast acidification.
 - g) How will you use distillery effluent in agriculture?

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) Describe the azeotropic distillation with a labelled diagram.
 - b) Explain the propagation practices of yeast.
 - c) Describe the construction of fermentation vessel.
 - d) Explain the manufacture of Industrial spirit.
 - e) State the toxicological effects of distillery waste water.
 - f) Describe the pre-treatment of enzyme.
- 3. Attempt any FOUR of the following:** **16**
- a) Describe batch fermentation process.
 - b) How do bacteria affect the fermentation process?
 - c) State the physical properties of sterile air.
 - d) Describe the manufacture of rum.
 - e) Describe the biological treatment by using tricking filter.
 - f) Draw a flow sheet diagram for manufacture of Vodka.
- 4. Attempt any FOUR of the following:** **16**
- a) Explain the enzyme dosing.
 - b) Give any four application of industrial fermentation process.
 - c) Describe the taxonomy of yeast with neat structure.
 - d) What are the factors influencing yeast growth?
 - e) Name the pollutants present in distillery waste water.
 - f) Define absolute alcohol. State its uses.

- 5. Attempt any FOUR of the following:** **16**
- a) What do you understand by evaporation? Justify your answer with suitable example.
 - b) Compare yeast and bacteria.
 - c) Describe the flow diagram for the manufacture of whisky.
 - d) Write Government stipulated condition for alcohol industry waste water.
 - e) Describe the importance role of yeast and enzymes in alcohol manufacturing.
 - f) Describe stimulation of yeast and acclimatisation of yeast.
- 6. Attempt any TWO of the following:** **16**
- a) Describe the use of sterile air system in the pre-fermenter.
 - b) Explain with a flow sheet the manufacture of brandy.
 - c) Describe the activated sludge process with a labelled diagram.
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