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Total No. of Questions: 09

B.Sc.(BT) (2014 to 2017) (Sem.-4) FUNDAMENTALS OF INDUSTRIAL BIOTECHNOLOGY

Subject Code: BSBT-208 M.Code: 47050

Time: 3 Hrs. Max. Marks: 60

## **INSTRUCTION TO CANDIDATES:**

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
- 3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

# **SECTION-A**

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## 1. Answer briefly:

- (a) Genetic markers
- (b) Bioreactor
- (c) Citric acid
- (d) Biocatalyst
- (e) Immobilization
- (f) Ales & Lager beer
- (g) White & red wine
- (h) Biofertilizer
- (i) Biocontrol agents
- (j) Biosafety aspects



#### **SECTION-B**

- 2. What is transformation? Describe briefly genetic markers for yeast transformation.
- 3. Describe the criteria for the formulation of medium for industrial fermentations.
- 4. Describe the scope and applications of an industrial biocatalyst.
- 5. What are alcoholic beverages? Describe the production of red wine with a flow diagram.
- 6. What are biofuels? Describe applications of fuel biotechnology.

#### **SECTION-C**

- 7. Describe the scope and applications of environmental biotechnology.
- 8. Describe briefly techniques for the immobilization of biocatalysts. Also highlight the applications of immobilized biocatalysts.
- 9. Describe briefly designing of fermenter. Also highlight its operations parameters.

NOTE: Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC against the Student.

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