

[This question paper contains 2 printed pages.]

**Sr. No. of Question Paper : 1532-C**

**F-7**

**Your Roll No.....**

Unique Paper Code : 2203703

Name of the Paper : Food Processing Equipment and Plant Design

Name of the Course : **B.Tech. Food Technology – Allied Course**

Semester : VII

Duration : 3 Hours

Maximum Marks : 75

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on the receipt of this question paper.
2. Question No. 1 is compulsory.
3. Attempt 5 questions in all.
4. All questions carry equal marks.

1. (i) Define the following : (Any six) (6×2=12)

- (a) Reduction ratio
- (b) Working capital
- (c) Reverse Osmosis
- (d) Sources of idea generation
- (e) Trommels
- (f) Food process simulation
- (g) Freezing time

- (ii) What is Musculo- skeletal disorder ? (3)

2. (a) Draw and explain working principle of desludging centrifuge ? (5)

*P.T.O.*

- (b) What is variable cost and fixed cost ? (5)
- (c) Explain different plant utilities ? (5)
- 3. (a) What is plant layout ? Draw its types ? (7)
- (b) Draw and describe flow chart for plant design ? (8)
- 4. (a) Draw and explain any two mixers for low viscosity fluids ? (7)
- (b) What is ergonomics ? (3)
- (c) Draw process flow sheet of UHT sterilized milk plant ? (5)
- 5. (a) What is plant profitability ? (5)
- (b) What are the various factors involved in grading ? (5)
- (c) What is break even analysis ? Explain with graph how the break even point is achieved ? (5)
- 6. (a) Explain flow sheet of bread making industry with mass and energy balance ? (10)
- (b) What is sensitivity analysis ? What are the steps involved ? (5)
- 7. Draw and explain working principle of : (8+7=15)
  - (a) Spray dryer
  - (b) Hammer mill