

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, B.Tech. (D.T.)**

Semester	: VI (V Dean)	Academic Year	: 2021-2022
Course No.	: DE-614	Course Title	: Dairy Plant Design and Layout
Credits	: 1+1 = 2	Total Marks	: 50
Day & Date	: Thursday, 19/05/2022	Time	: 02:30 hrs.

- Note :**
- 1) All questions from **Section 'A'** are compulsory.
  - 2) Solve **Any Three** questions from **Section 'B'**.
  - 3) Draw neat and well labelled diagram wherever necessary.

**SECTION - 'A'**

Q. 1 A) Choose the most appropriate answer from the options given below: (05)

- i) Optimum head load (kg) .....
  - a) 5-10
  - b) 10-15
  - c) 15-25
  - d) 25-35
- ii) Space between processing equipments should be .....
  - a) 1 ft
  - b) 3 ft
  - c) 5 ft
  - d) 8 ft
- iii) Which location you will select for product manufacturing plant?
  - a) City location
  - b) Suburban location
  - c) Country location
  - d) None of these
- iv) Fluid milk processing plant should be located in .....
  - a) City location
  - b) Suburban location
  - c) Country location
  - d) None of these
- v) A small dairy plant handles up to ..... lit/day
  - a) 20,000
  - b) 25,000
  - c) 30,000
  - d) 35,000

B) Define the following. (05)

- i) Topography
- ii) Illumination
- iii) Ventilation
- iv) Mortar
- v) RCC

Q. 2 A) Give the values of the following. (05)

- i) Floor slope of processing room
- ii) Floor slope of cold room
- iii) Height of processing room
- iv) Height of cold storage room
- v) Minimum reflectance of dairy floor

**(P.T.O.)**

- B) State whether True or False. If false rewrite the statement after making necessary corrections. (05)
- i) Mandana stone flooring is used where acid and alkali resistance conditions are required.
  - ii) Chequered and anchored cast iron tiles are slippery hence not used for flooring in RMRD.
  - iii) 9 liter water is required to wash milk can.
  - iv) Trapezoidal plot is required for straight line type layout.
  - v) Space requirement for any section is 10 times the total area of equipments to be installed in that section.

#### SECTION - 'B'

- Q. 3 A) Explain in detail the classification of dairy plants. (05)  
B) Give the points to be considered for selection of site. (05)
- Q. 4 A) Explain the general points to be considered for designing dairy plant. (05)  
B) Explain the types of layouts. (05)
- Q. 5 A) What do you mean by process schedule? (03)  
B) Explain the layout of RMRD with neat sketch. (03)  
C) Discuss the building materials used in dairy plant in brief. (04)
- Q. 6 A) Explain different floor material use in dairy plant. (03)  
B) Explain the floor trap used in drainage system with neat sketch. (03)  
C) Explain with neat sketch the layout of fluid milk processing section. (04)
- Q. 7 Explain in detail the concept of arrangement at different section in dairy with neat diagram. Also discuss the arrangement at workshop and garages in dairy plant. (10)

\*\*\*\*\*