

Semester	: III (V DEAN)	Academic Year	: 2018-2019
Course No.	: DT- 304	Course Title	: Condensed and Dried Milks
Credits	: 3+1=4	Total Marks	: 50
Day & Date	: Wednesday, 09/01/2019	Time	: 15.00 to 17.00 Hrs.

**Note :**

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

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

- i) Seeding
- ii) Heat-stability of milk
- iii) Instantization of milk powder
- iv) Foam spray drying
- v) Age-thickening of condensed milk

- Fore-warming of milk before condensing.
- Heating of whole milk powder at  $93^{\circ}\text{C}$  / 3 sec.
- Control of out-let temperature for better quality powder.
- Mashing of barley and wheat flour for malted milk food manufacture.
- Cake format in milk powder.

(P.T.O.)

- B) State whether True or False. If false. Rewrite the statement after making necessary corrections in underlined word. (05)
- i) The "Doctor blades" are kept at an angle of 40° - 48° in the Drum dryer.
  - ii) The pH of Human milk is lower that favors bacterial growth.
  - iii) The objective of Malting operation is to convert Lipids into fatty acid.
  - iv) The caking defect of powder does not occur below a<sub>w</sub> 0.4.
  - v) Hydraulic pressure jet Type Nozzle uses the pressure in the range of 141-211 kg/cm<sup>2</sup>.

### SECTION - 'B'

- Q. 3. A) Discuss briefly the various instant properties of milk powder. (05)  
B) Give the steps involved in the manufacture of "High Heat Skim milk powder". (05)
- Q. 4 A) Discuss various body and textural and Flavour defects of Sweetened Condensed milk their causes and remedy. (05)  
B) How evaporated milk is manufactured. (05)
- Q. 5 A) Differentiate between MVR and TVR. (03)  
B) Enlist various factors that affect the heat stability of milk and also the stabilizing salts that are used to stabilize the milk against heat stability. (03)  
C) Give the flow chart (with all technical details) for the manufacture of "Dried Skim Milk". (04)
- Q. 6 A) Write about Fluid bed Drier. (03)  
B) Write about three body and textural defects of whole milk powder, their causes and remedies. (03)  
C) Mention the steps (with all technical details) involved in the manufacture of infant milk food. (04)
- Q. 7 Differentiate between cow and Human milk. Discuss in details "Humanization of buffalo milk". (10)

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