

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMEISTER END THEORY EXAMINATION, B.TECH. (D.T.) DEGREE COURSE 2017-18**

Semester	: III (New Syllabus)	Academic Year	: 2017-2018
Course No.	: DT-304	Course Title	: Cheese Technology
Credits	: 3+2=5	Total Marks	: 50
Day & Date	: Wednesday, 10.01.2018	Time	: 15.00 to 13.00 Hrs.

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

**SECTION –‘A’**

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

- i) Milk for cheddar cheese manufacture is commonly standardized to a casein/fat ratio of .....
  - a) 0.9
  - b) 1.3
  - c) 0.4
  - d) 0.7
- ii) The setting of milk for cheese making is accomplished by the addition of .....
  - a) Lactic starters
  - b) Calcium chloride
  - c) Rennet
  - d) Annato
- iii) Syneresis of cheese curd is influenced by .....
  - a) Temperature
  - b) Acidity
  - c) Salt
  - d) All of these
- iv) Too high temperature at hooping and pressing of cheese curd causes .....
  - a) Open texture
  - b) Excessive fat loss
  - c) Poor whey drainage
  - d) None of these
- v) The optimum temperature for setting of milk during cheddar cheese making .....
  - a) 31°C
  - b) 18°C
  - c) 45°C
  - d) 51°C

B) Do as directed. (05)

- i) According to FSSAI fat percentage in soft cheese is
- ii) Mention any two secondary flora of cheese.
- iii) Give the example for microbial coagulant in cheese manufacture.
- iv) Mention the temperature and humidity for cold ripening of cheddar cheese.
- v) Write the name of the country from which Cheddar cheese is originated.

Q. 2 A) Define the following. (05)

- i) Salting
- ii) Milling
- iii) Hopping
- iv) Dressing
- v) Green cheese

(P.T.O.)



- B) State "True or False", If False, rewrite the statement after making necessary (05) corrections in underline word.
- i) Denatured whey protein associated with the casein micelle could act as a bridging material between the materials.
  - ii) Coagulation of casein fraction of milk to form gel can be achieved by lowering the milk pH.
  - iii) Annato is added at the rate of 30 to 200 ml / 100 kg cheese.
  - iv) Manufacture of Mozzarella cheese originated in Denmark.
  - v) Pencillium candidum produces a pure white surface on mould ripened cheese.

#### SECTION – 'B'

- Q. 3. What is directly acidified Mozzarella cheese? What are its advantages and disadvantages? (06)
- Q. 4. Describe the manufacturing process of Swiss cheese and what are its characteristics? (06)
- Q. 5. Explain the defects in cheese causes and preventive measures. (06)
- Q. 6. a) Write a note on accelerated cheese ripening. (02)  
b) Write about effect of amount of casein in milk in cheese production. (02)  
c) Define cheese according to FSSA-2011. (02)
- Q. 7. a) Explain about factors which affect the yield of cheese. (03)  
b) Write the FSSAI standards for different types of cheese. (03)
- Q. 8. a) What are the objectives of cheddaring in cheddar cheese preparation? (02)  
b) Elaborate the role of rennet substitutes. (02)  
c) Write the importance of pre treatment of cheese milk for cheese making. (02)
- Q. 9. a) Write a note on nutritive value of cheese. (02)  
b) Write about the microbial quality of raw milk used for cheese production. (04)

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