

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

Semester	: IV (V Dean)	Academic Year	: 2021-2022
Course No.	: DT-406	Course Title	: Ice-cream & Frozen Desserts
Credits	: (2+1=3)	Total Marks	: 50
Day & Date	: Saturday, 03/09/2022	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) Ice cream was drawn from the freezer at ..... temperature.  
a) - 4.4 to 5°C                      b) 10 °C  
c) 4 °C                                  d) -1 °C
- ii) ..... is an indigenous frozen dairy product.  
a) Khoa                                  b) Chhana  
c) Kulfi                                  d) Basundi
- iii) During ageing of ice cream mix, the hydration of ..... occurs.  
a) Fat                                      b) Protein  
c) Lactose                                d) Minerals
- iv) ..... is used as sweetener in diabetic ice cream.  
a) Sucrose                                b) Saccharine  
c) Fructose                                d) Glucose
- v) When freezing point was reached, liquid water changes to .....  
a) Solid                                    b) Gas  
c) Ice crystals                            d) No change

B) Define the following. (05)

- i) Homogenization of Ice cream mix
- ii) Diabetic Ice cream
- iii) Mousse
- iv) Sodium alginate
- v) Puddings

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

**Coloumn - 'A'**

- i) Probiotic ice cream
- ii) Bisque
- iii) Gelatin
- iv) Serum point method
- v) Over run

**Coloumn - 'B'**

- a) Protein
- b) Standardization
- c) Yield
- d) Added Cake and Bakery products
- e) *B.bifidum*

(P.T.O.)

- B) State whether True or False. If false, rewrite the statement after making necessary corrections in the underlined words. (05)
- i) The weight by volume of ice cream not less than 525 gms/lit.
  - ii) Butter fat is replaced by vegetable or animal fat in mellorine.
  - iii) Commonly used sweetener in ice cream is aspartame.
  - iv) Carageenan is extracted from microbes.
  - v) Pasteurization of mix is done before Homogenization.

**SECTION –‘B’**

- Q. 3 A) Briefly discuss the defects of ice cream with their causes and prevention. (05)  
B) Describe the methods used for figuring and calculation of mix. (05)
- Q. 4 A) Draw the flow chart for manufacture of ice cream and briefly explain the processing steps. (05)  
B) Explain freezing of ice cream mix and enlist the factors affecting freezing time. (05)
- Q. 5 A) Briefly explain the history and development of Ice cream and frozen desserts. (03)  
B) What is the nutritional importance of Ice cream in diet? (03)  
C) Define Diabetic, dietetic and Probiotic ice cream. (04)
- Q. 6 A) Define Ice cream and Write its standards according to FSSAI (2011). (03)  
B) Briefly classify the ice cream. (03)  
C) Enlist the dairy ingredients used in ice cream with their sources and write its importance. (04)
- Q. 7 Define and classify stabilizers and emulsifiers along with its role. Write an ideal properties of stabilizers and emulsifiers. (10)

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