

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B.Tech. (D.T.) Degree Course 2017-18

Semester	: IV (V DEAN)	Academic Year	: 2017-2018
Course No.	: DT- 406	Course Title	: Ice-Cream and Frozen Desserts
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Tuesday, 19.06.2018	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.

SECTION – 'A'

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

- i) Ice cream containing appropriate flavourings and particles of either grapes, macaroons, ginger snaps, sponge cake or other bakery products is called.....
 - a) Mousse
 - b) Lacto
 - c) Bisque
 - d) Cassata
- ii) Polysorbates are derivatives of sorbitan esters.
 - a) Polyoxyethylene
 - b) Ethoxylated Monoglyceride
 - c) Monoglycerides
 - d) polyols
- iii) Ices are made of fruit juice, sugar and stabilizer, with or without additional fruit acid, colour, flavouring or water and frozen to an overrun of.....
 - a) 10-15%
 - b) 40-50%
 - c) 60-70%
 - d) 25-30%
- iv) Artificial flavours are based on.....
 - a) Ethyl vanillin
 - b) Cocoa
 - c) Vanilla
 - d) None of the above
- v) The serum point method for standardization of ice cream mixes was found by.....
 - a) Mitten
 - b) Sukumar De
 - c) Bhandari
 - d) Marshall and Arbuckle

B) Define the following. (05)

- i) Sandy texture
- ii) Stabilizers
- iii) Mellorine
- iv) Sherbets
- v) Parevine

Q. 2 A) Give reasons for the following. (05)

- i) Stabilizers and emulsifiers should be added in the mix to get better quality of ice cream.
- ii) Homogenization of ice cream mix is a most essential step in the manufacture of ice cream.
- iii) The operation of the continuous freezer demands care and management on the part of the operator.
- iv) Pre-treatments should be given to nuts before adding it to ice-cream.
- v) Control of over-run is very important during the manufacture of ice cream.

(P.T.O.)

- B) State whether True or False. If false. Rewrite the statement after making (05)
necessary corrections in underlined word.
- i) Brookfield viscometer is used for measuring the viscosity of milk.
 - ii) The opportunities of recontamination are considerably greater in the case of ice cream mixes than in the case of pasteurized market milk.
 - iii) Ice cream making was revolutionized in 1851, when Sommer started the first wholesale ice cream manufacturing operation in baltimore, Maryland.
 - iv) Diabetic ice cream is made with low sweetening agent content.
 - v) Frozen yoghurt may contain egg yolk solids.

SECTION - 'B'

- Q. 3 A) Write short notes on the following. (05)
i) Gelatin
ii) Batch freezer
- B) Write the role of the following constituents in ice cream. Name five sources of (05)
each constituent.
i) Emulsifier
ii) Fat
- Q. 4 A) Discuss the objectives of ice cream hardening, various methods used for (05)
hardening and factors affecting the rate of hardening.
- B) Write the importance of use of stabilizers in ice cream and give the mechanism (05)
of action of stabilizers in ice cream.
- Q. 5 A) Write FSSAI definition for Medium fat ice cream. (03)
B) What are the changes in ice cream during freezing? (03)
C) Explain the steps for operation of continuous ice cream freezer. (04)
- Q. 6 A) Give international terms used for ice cream. (03)
B) Describe different defects of ice cream. (03)
C) Describe the role of sweeteners in ice cream and state the different sources of (04)
sweeteners used in ice cream.
- Q. 7 Discuss the present status and future prospective of ice cream industry in India. (10)
