



ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION

Model Syllabus for 4-Year UG Honours in B.Sc. (Food Science and Technology) as Major in consonance with Curriculum framework w.e.f. (W.E.F. AY-2026-27)

COURSE STRUCTURE

Year	Semester	Course	Title of the Course	No. of Hrs /Week	No. of Credits
II	III	5	Technology of Fats and Oils	3	3
			Technology of Fats and Oils-Practical	2	1
		6	Dairy Technology	3	3
			Dairy Technology-Practical	2	1
		7	Confectionery Technology	3	3
			Confectionery Technology-Practical	2	1

SEMESTER - III

COURSE 7: CONFECTIONERY TECHNOLOGY

Theory

Credits: 3

3 hrs/week

Learning Objectives

To understand composition and manufacture of various confections

Learning Outcomes:

Upon successful completion of the course, a student will be able to:

LO1: To gain knowledge about the status of confectionery industries & information

about sugar. LO2: To learn about the various ingredients used in confectionery product.

LO3: To learn the manufacturing methods of chocolates.

LO4: To study the technology & ingredients involved in production of jams &

jellies. LO5: To understand the causes of cereal bars.

UNIT –I

Status of confectionery industries in India – Types of sugar: granulated, Caster, Icing, Liquid sugars, Brown Sugars, Molasses, and microcrystalline sugars. Composition of sugars- Properties of sugar and sugar solutions – Glucose syrups and refined glucose syrups in sugar confectionery manufacture.

UNIT –II

Oils and Fats – uses in confectionery items, Milk and related products, Composition of milk and functional properties of its major components, Application of milk and milk based ingredients. Colors – Factors influencing choice – natural and Synthetics colors. Flavoring - Natural and Artificial – Flavor Strength, factors effecting stability of flavoring compounds. General technical aspects of industrial sugar confectionery manufacture, Compositional effects, change of state, evaporation, sweetness and taste.

UNIT – III

Manufacture of hard-boiled sweets: ingredients, Prevention of recrystallization and stickiness, Manufacturing methods of toffee and fudge, Product types: Caramel, toffee and fudge: - Ingredients, Structure of toffee, formulation, processing, toffee stability. Cocoa beans, cocoa fruit, pulp. Cocoa chocolate and related products: Sequence of processes, Chocolate recipes, Cocoa powder, mixing, refining and conching, tempering of chocolates.

UNIT-IV

Gums and Jellies: Technology and Chemistry of hydrocolloids, Hydrocolloid pretreatment process, Liquor preparation, shaping, drying, finishing treatment, re-work, common faults, causes and cures. Liquorices paste, cream paste and aerated confectionery, Ingredients of liquorices paste and manufacture, ingredients of cream paste, Manufacture and extrusion of cream paste. Liquorices all shorts, aerated confectionery, Methods of aeration – Marshmallow – Nougat.

UNIT – V

Tablets, Lozenges and Sugar panning: Tablets granulation, ingredients compression, lozenges, Sugar panning, hard panning soft panning, polishing. Additional panning techniques. Chewing gums technology: Gum base, sugar, flavors, humectants, Fruit acids, sugar-free chewing gum ingredients, formulation Chewing gum mixing, count line components, Manufacturing of count-lines, Cereal bars.

REFERENCES

1. Sugar Confectionery Manufacture E.B. Jackson, 2nd edition, 1995 Blackie Academic and Professional, Glasgow.
2. Sugar Confectionery and Chocolate Manufacture: R.Lees 197 Leonard Hill Books, International Text Book Company Limited.
3. Meade-Chen Cae Sugar Handbook :Chen, J C PO, 11th edition, 1985 John Wiley and Sons, New York
4. Sugar Technology for Students Lionnet, G R E, 1999 Lang Fred, Durban, S.Africa

SEMESTER - III

COURSE 7: CONFECTIONERY TECHNOLOGY

Practical	Credits: 1	2 hrs/week
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1. Analysis of sucrose (Liquid and sugar Crystals)
2. Analysis of confectionery products
3. Handling of processing equipment in sugar confectionery
4. Preparation of Hard boiled sweets
5. Preparation of Chocolate syrup and moulded chocolates
6. Preparation of Fudge
7. Preparation of fondant
8. Preparation of marshmallow
9. Study of working principles of Evaporator,
10. Study of working principles of Crystallizer and Centrifugal machines
11. Visit to the Sugar Confectionary Industry.
12. Cost benefit analysis of Confectionery industry

4- Year UG Honours, Major
Syllabus
(2026-27)
Semester-III

Model Question Paper

Time : 3hrs

Marks:75

Part-A

Answer any Five Questions. Each Question carries 3 Marks.

5x3=15

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Answer the following questions. Each question carries 12 Marks

5x12=60

11. a) Unit-I
(Or)
b) Unit-I

12. a) Unit-II
(Or)
b) Unit-II

13. a) Unit-III
(Or)
b) Unit-III

14. a) Unit-IV
(Or)
b) Unit-IV

15. a) Unit-V
(Or)
b) Unit-V