

FRUIT GROWER (FRGR)
CLASS XII
SEMESTER III

THEORY

FULL MARKS:20

[MCQ Type (1 Mark) Question]

UNIT	Topic	No. of periods assigned	Marks
1	Importance of fruits in diet and classification of fruits crops	9	5
2	Selection of land,area identification,land preparation	10	7
3	Establishment of orchard and different methods of planting	9	6
4	Outline of propagation of fruit crops (sexual and asexual)	8	6
5	Method of fertilizer application and irrigation	9	6
	Total	45	30

DETAILED SYLLABUS

UNIT	Topic / Sub Topic	No. of periods assigned
1	Importance of fruits in diet and classification of fruits crops: Importance of fruits in human nutrition; Classification of fruits on the basis of the number of ovaries and the number of flowers involved in their formation;Role of fruit grower	9
2	Selection of land,area identification,land preparation: Selection of land for fruit orchard, area identification for fruit orchard, landpreparation for planting of fruit crops	10
3	Establishment of orchard and different methods of planting: Planning for orchard establishment,preliminary operations for orchard establishment, methods of planting	9
4	Outline of propagation of fruit crops (sexual and asexual): Needs of propagation, sexual method of propagation, asexual method of propagation, advantages and disadvantages	8
5	Method of fertilizer application and irrigation: Definition of manures andfertilizers with examples, different methods of fertilizer application;Need and methods of irrigation in orchard	9
	Total	45

**FRUIT GROWER (FRGR)
CLASS XII**

SEMESTER IV

THEORY

FULL MARKS: 30

[SAQ (2 Marks) and LAQ Type (4 Marks) Question]

UNIT	Topic	No. of periods assigned	Marks
1	Cultivation of some important fruit crops (mango, litchi, banana, sweet orange, mandarin orange, pineapple, guava, papaya and coconut)	30	16
2	General concept of high-density planting (HDP)	6	4
3	Post-harvest managements: Harvesting, washing and cleaning, sorting, grading, packaging, transportation and storage	10	4
4	Ripening: Changes during ripening, ripening agents and delay in ripening methods	10	4
5	Economics of fruit production (small farmer and commercial orchard)	7	2
	Total	63	30

DETAILED SYLLABUS

UNIT	Topic / Sub Topic	No. of periods assigned
1	Cultivation of some important fruit crops (mango, litchi, banana, sweet orange, mandarin orange, pineapple, guava, papaya, and coconut): Variety, propagation, climate and soil, planting, spacing, nutrient requirement, inter-culture operations, major pests and diseases – damage symptoms and control measures, harvesting, yield, marketing, and uses	30
2	General concept of high-density planting (HDP): Definition, types with examples, characteristics and advantages of HDP	6
3	Post-harvest managements - Harvesting, washing and cleaning, sorting, grading, packaging, transportation and storage: Importance of post-harvest technology, time of harvest horticulture crops; brief idea on washing and cleaning, sorting; brief idea on grading, packaging, transportation, and storage including influencing factors	10
4	Ripening - Changes during ripening, ripening agents and delay in ripening methods: Definition of ripening, classification of fruits on the basis of ripening with examples, changes during ripening process, commercial ripening agents, common methods of delayed ripening	10
5	Economics of fruit production (small farmer and commercial orchard): Cost of cultivation of mango and banana, gross income, net income and cost:benefit ratio	7
	Total	63

PRACTICAL AND PROJECT
CLASS XII

FULL MARKS: 50 (Practical) + 20 (Project)

NO. OF PERIODS ASSIGNED: 144 (120 for Practical+24 for Project)

DETAILED SYLLABUS

Sl. No.	Topic	No. of periods
SEMESTER III		
1	Site selection for orchard	4
2	Preparation of land for orchard	4
3	Fencing of orchard land	4
4	Propagation through seeds	2
5	Practicing propagation through layering and cutting	4
6	Practicing propagation through budding and grafting	4
7	System of planting: square system and rectangular	3
8	System of planting: triangular and hexagonal	4
9	System of planting: quincunx and contour	4
10	Demonstrate different methods of manures and fertilizers application	4
11	Demonstrate different methods of irrigation and drainage	4
12	Practicing intercultural operations	4
13	Identification of different varieties of mango	4
14	Identification of different varieties of banana	4
15	Identification of different varieties of guava	3
16	Identification of different groups of citrus	2
17	Identification of different groups of litchi	2
	Total	60
SEMESTER IV		
18	Pre-treatment of banana suckers for control of pests and diseases	2
19	Practicing desuckering in banana	2
20	Demonstrate different sex forms in papaya	2
21	Identification important pests: mango and litchi	4
22	Identification important diseases: mango and litchi	4
23	Identification important pests: banana and coconut	4
24	Identification important diseases: banana and coconut	4
25	Demonstrate the process of harvesting	6
26	Demonstrate the process of cleaning and packing	4
27	Use of different agents for ripening	4
28	Acquaintance with different fruit plants	4
29	Develop an idea about bearing habits of fruits	4
30	Identify the fruit crops bearing on current or past season growth	4
31	Visit model orchard / commercial orchard within district	12
	Total	60
	PROJECT	24
	Total	84
	Class XII Total	144

PROJECT (20 marks: Two Projects, 10 marks each)

Sl. No.	Project	Details	Marks
1	Project I (12 periods)	Project on a Model Orchard with different fruit crops (mango / banana / litchi / guava)	10
2	Project II (12 periods)	Project on Economics of cultivation for Mango Orchard	10
3	Project III (12 periods)	Project on value-chain of Fruit (mango / banana / guava)	10
4	Project IV (12 periods)	Project on a production unit for value-added products of mango /guava (types of value-added products, production unit, process of production, quality, marketing and economics)	10

Note: The school may develop other Projects as per their needs, choices or available resources.