

Sr. No.	Months	Topic	Unit
1	August	Basic concepts of ecology: definition, scope and significance	I
2		Habitat and ecological niche	I
3		Ecosystem: concept, components, properties and functions	I
4		Ecological energetics and energy-flow models	I
5		Food chain, food web and trophic structure	I
6		Ecological pyramids and concept of productivity	I
7	September	Abiotic factors: light, temperature, humidity, wind, rainfall and topography	II
8		Edaphic and biotic factors; introduction to major ecosystems of the world	II
9		Biogeochemical cycles: concept, reservoir pool, gaseous and sedimentary cycles	II
10		Community ecology: characteristics, composition, structure, origin and development	II
11		Ecological succession	II
12	October	Population growth and regulation	III
13		Population interactions: competition, predation, parasitism, commensalism and mutualism	III
14		Biodiversity and conservation of natural resources	III
15	November/ December	Climate change: global warming, greenhouse effect and ozone depletion	IV
16		Sustainable development; natural resources—their types, uses and conservation	IV
17		Environmental pollution: air, water and soil pollution; management strategies	IV
18		Environmental Impact Assessment; revision, class test and assignment	IV

Rameet

Govt. College, Safidon (Jind)-126112

Session: 2026-27 (Odd Semester)

Lesson Plan – Skill Enhancement Course (Theory)

Name of the Teacher: Rameet Kaur Subject: Microtomy

Course Code: B23-SEC-321 Credit: 2 Contact Hours/Week: 2

Sr. No.	Months	Topic	Unit
1	August	Microtomy: introduction, definition and history	I
2		Applications of microtomy in biological sciences	I
3		Types of microtomes: rotary microtome	I
4		Sledge microtome and cryomicrotome	I
5	September	Collection of samples/specimens for histological examination	II
6		Transportation and preservation of histological samples/specimens	II
7		Basic concepts and purpose of fixation	II
8		Various types of fixatives used in microtomy	II
9		Process and stages of fixation	II
10		Embedding and block formation	II
11	October	Section cutting: principles of paraffin section cutting	III
12		Stretching and spreading of sections	III
13		Attachment of sections to glass slides	III
14		Staining: principles and general procedure	III
15		Preparation of stains and solvents	III
16	November/ December	General staining procedures for paraffin-embedded tissue	IV
17		Nuclear and cytoplasmic stains: Haematoxylin and Eosin staining	IV
18		Mercury Bromophenol Blue staining	IV
19		Toluidine Blue staining	IV
20		Commonly used mountants in microtomy	IV
21		Revision, class test and assignment	IV

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Session: 2026-27 (Odd Semester)

Lesson Plan – Vocational Course (Theory)

Name of the Teacher: Rameet Kaur Subject: Apiculture

Course Code: B23-VOC-102 Credit: 2 Contact Hours/Week: 2

Sr. No.	Months	Topic	Unit
1	August	Apiculture: meaning, definition, scope and history	I
2		Status of the apiculture industry in India	I
3		Classification and life cycle of honey bee	I
4		Identification of indigenous and exotic honey-bee species	I
5	September	Cultivable species of honey bee with reference to India	II
6		Social organization of honey bees: queen, drone and workers	II
7		Nesting behaviour and foraging behaviour of honey bees	II
8		Seasonal management and swarming in honey bees	II
9		Waggle dance and defense in honey bees	II
10		Diseases and enemies of bees: control and preventive measures	II
11	October	Role of bees in cross-pollination in horticulture and agriculture	III
12		Methods of artificial bee keeping	III
13		Equipment used in the bee-keeping industry	III
14		Methods of extraction of honey and other bee products	III
15	November/December	Products of the apiculture industry and their uses: honey and bee wax	IV
16		Royal jelly, bee venom, propolis and pollen: uses and value	IV
17		Bee-keeping industry: present status and future	IV
18		Prospects of apiculture as a self-employment venture	IV
19		Economics of apiculture: expenditure, net income and additional benefits	IV
20		Revision, class test and assignment	IV

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