

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Dr. Savita	Department - Agriculture
Class - B.Sc. (hons.) agri.	Subject - Fundamentals of Genetics
Semester - 2nd	Subject Code - 23BSAG-201
Week-1	
23-Mar-24 Pre and Post Mendelian concepts of heredity	
Week-2	
25-Mar-24	Mendelian principles of heredity
27-Mar-24	Architecture of chromosome; chromonemata, chromosome matrix, chromomeres, centromere
29-Mar-24	do
Week-3	
1-Apr-24	secondary constriction and telomere; special types of chromosomes.
3-Apr-24	Chromosomal theory of inheritance
5-Apr-24	Cell cycle and cell division- mitosis and meiosis
Week-4	
8-Apr-24	Probability and Chi-square
10-Apr-24	Dominance relationships
12-Apr-24	Epistatic interactions with example
Week-5	
15-Apr-24	Multiple alleles, pleiotropism and pseudoalleles
17-Apr-24	Sex determination and sex linkage
19-Apr-24	-do
Week-6	
22-Apr-24	sex limited and sex influenced traits,
24-Apr-24	do
26-Apr-24	do
Week-7	
29-Apr-24	Blood group genetics
1-May-24	do
3-May-24	Linkage and its estimation,
Week-8	
6-May-24	do
8-May-24	crossing over mechanisms
10-May-24	do
Week-9	
13-May-24	chromosome mapping
15-May-24	Structural and numerical variations in chromosome and their implications
17-May-24	do
Week-10	

20-May-24	use of haploids, dihaploids and doubled haploids in Genetics
22-May-24	do
24-May-24	Mutation, classification
Week-11	
27-May-24	Methods of inducing mutations & CIB technique
29-May-24	mutagenic agents and induction of mutation
31-May-24	Qualitative & Quantitative traits, Polygenes and continuous variations, multiple factor hypothesis
Week-12	
3-Jun-24	-do-
5-Jun-24	Cytoplasmic inheritance
7-Jun-24	Genetic disorders.
Week-13	
10-Jun-24	Nature, structure & replication of genetic material
12-Jun-24	Protein synthesis
14-Jun-24	Transcription and translational mechanism of genetic material
Week-14	
17-Jun-24	Gene concept: Gene structure, function and regulation,
19-Jun-24	do
21-Jun-24	Lac and Trp operons
	Revision

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Dr. Savita

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Soil and Water Conservation Engineering

Semester - 2nd

Subject Code - 23 BSAG-203

Week-1

Week-2

25-Mar-24	Introduction to Soil and Water Conservation
26-Mar-24	do
27-Mar-24	causes of soil erosion

Week-3

1-Apr-24	Definition and agents of soil erosion
2-Apr-24	do
3-Apr-24	Water erosion

Week-4

8-Apr-24	Forms of water erosion
9-Apr-24	do
10-Apr-24	Gully classification and control measures

Week-5

15-Apr-24	do
16-Apr-24	Soil loss estimation by universal Loss Soil Equation
17-Apr-24	do

Week-6

22-Apr-24	Soil loss measurement techniques
23-Apr-24	do
24-Apr-24	Principles of erosion control

Week-7

29-Apr-24	do
30-Apr-24	Introduction to contouring
1-May-24	do

Week-8

6-May-24	do
7-May-24	strip cropping
8-May-24	do

Week-9

13-May-24	Contour bund
14-May-24	Graded bund
15-May-24	bench terracing

Week-10

20-May-24	Grassed water ways and their design
21-May-24	do
22-May-24	do

Week-11

27-May-24	Water harvesting and its techniques
28-May-24	do
29-May-24	do

Week-12

3-Jun-24	do
4-Jun-24	Wind erosion
5-Jun-24	do

Week-13

10-Jun-24	mechanics of wind erosion
11-Jun-24	do
12-Jun-24	types of soil movement

Week-14

17-Jun-24	do
18-Jun-24	Principles of wind erosion control and its control measures
19-Jun-24	do

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GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Dr. Savita

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Fundamentals of Crop Physiology

Semester - 2nd

Subject Code - 23 BSAG-204

Week-1

23-Mar-24 Introduction to crop physiology

Week-2

28-Mar-24 And its importance in Agriculture

29-Mar-24 Plant cell: an Overview

30-Mar-24 do

Week-3

4-Apr-24 Diffusion and osmosis

5-Apr-24 Absorption of water

Week-4

11-Apr-24 do

12-Apr-24 transpiration and Stomatal Physiology

13-Apr-24 do

Week-5

18-Apr-24 do

19-Apr-24 Mineral nutrition of Plants

Week-6

25-Apr-24 do

26-Apr-24 Functions and deficiency symptoms of nutrients

27-Apr-24 do

Week-7

1-May-24 do

2-May-24 nutrient uptake mechanisms

Week-8

9-May-24 do

10-May-24 do

11-May-24 do

Week-9

16-May-24 Photosynthesis: Light and Dark reactions

17-May-24 do

Week-10

23-May-24 do

24-May-24 C3, C4 and CAM plants

25-May-24 do

Week-11

30-May-24 Respiration: Glycolysis

31-May-24 TCA cycle

Week-12

6-Jun-24 electron transport chain

7-Jun-24 Fat Metabolism: Fatty acid synthesis and Breakdown

8-Jun-24 do

Week-13

13-Jun-24 Plant growth regulators: Physiological roles and agricultural uses

14-Jun-24 do

Week-14

20-Jun-24 Physiological aspects of growth and development of major crops: Growth analysis

21-Jun-24 do

22-Jun-24 Role of Physiological growth parameters in crop productivity

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Lesson Plan- March to June 2024

Name - Dr. Savita

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Fundamentals of Agricultural Economics

Semester - 2nd

Subject Code - 23 BSAG-205

Week-1

Week-2

25-Mar-24	Economics: Meaning, scope and subject matter
26-Mar-24	definitions, activities, approaches to economic analysis
27-Mar-24	micro and macro economics

Week-3

1-Apr-24	positive and normative analysis
2-Apr-24	Nature of economic theory
3-Apr-24	rationality assumption

Week-4

8-Apr-24	concept of equilibrium
9-Apr-24	economic laws as generalization of human behaviour
10-Apr-24	Basic concepts: Goods and services, desire, want, demand, utility

Week-5

15-Apr-24	cost and price, wealth, capital, income and welfare
16-Apr-24	Agricultural economics: meaning, definition, characteristics of agriculture
17-Apr-24	importance and its role in economic development

Week-6

22-Apr-24	Agricultural planning and development in the country
23-Apr-24	Demand: meaning, law of demand, schedule and demand curve, determinants,
24-Apr-24	utility theory; law of diminishing marginal utility, equi-marginal utility principle

Week-7

29-Apr-24	do
30-Apr-24	Consumer's equilibrium and derivation of demand curve, concept of consumer surplus
1-May-24	do

Week-8

6-May-24	Elasticity of demand: concept and measurement of price elasticity
7-May-24	income elasticity and cross elasticity
8-May-24	Production: process, creation of utility, factors of production, input output relationship.

Week-9

13-May-24	do
14-May-24	do
15-May-24	Laws of returns: Law of variable proportions and law of returns to scale

Week-10

20-May-24	do
21-May-24	do
22-May-24	Cost: concepts, short run and long run cost curves

Week-11

27-May-24	do
28-May-24	do
29-May-24	Supply: Stock v/s supply, law of supply, schedule, supply curve, determinants of supply, elasticity of supply.

Week-12

3-Jun-24	do
4-Jun-24	do
5-Jun-24	do

Week-13

10-Jun-24	Market structure: meaning and types of market, basic features of perfectly competitive and imperfect markets
11-Jun-24	do
12-Jun-24	do

Week-14

17-Jun-24	Price determination under perfect competition; short run and long run equilibrium of firm industry, shut down and break even points.
18-Jun-24	Distribution theory: meaning, factor market and pricing of factors of production
19-Jun-24	Concepts of rent, wage, interest and profit

Revision

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Ms. Sunitha

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Agrilcultural Microbiology

Semester - 2nd

Subject Code - 23 BSAG-202

Week-1

23-Mar-24 Introduction. Microbial world: Prokaryotic and eukaryotic microbes

Week-2

26-Mar-24 Bacteria: cell structure, chemoautotrophy, photo autotrophy, growth

30-Mar-24 do

Week-3

2-Apr-24 Bacterial genetics: Genetic recombination transformation

Week-4

9-Apr-24 Conjugation and transduction

13-Apr-24 Plasmids, transposon

Week-5

16-Apr-24 Role of microbes in soil fertility and crop production

Week-6

23-Apr-24 Carbon, Nitrogen, Phosphorus and Sulphur cycles

27-Apr-24 do

Week-7

30-Apr-24 Biological nitrogen fixation- symbiotic, associative and asymbiotic

Week-8

7-May-24 do

11-May-24 do

Week-9

14-May-24 Azolla, blue green algae andmycorrhiza

Week-10

21-May-24 Rhizosphere and phyllosphere

25-May-24 do

Week-11

28-May-24 Microbes in human welfare

Week-12

4-Jun-24 Silage production

8-Jun-24 Biofertilizers

Week-13

11-Jun-24 Biopesticides

Week-14

18-Jun-24 Biofuel production and biodegradation of agrowaste

22-Jun-24 do

25-Jun-24 Rivision

29-Jun-24 do

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Ms. Sunitha Fogat

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Fundamentals of Agricultural Extension Education

Semester - 2nd

Subject Code - 23 BSAG-206

Week-1

23-Mar-24 Education: Meaning, definition & types

Week-2

25-Mar-24 Extension education- meaning, definition, scope and process

28-Mar-24 Objectives and principles of extension education

29-Mar-24 Extension programme planning - meaning, Process, Principles

Week-3

1-Apr-24 Steps in Programme Development

4-Apr-24 Extension systems in India

5-Apr-24 Extension efforts in pre-independence era (Sriniketan, Marthandam, Firka Development Scheme, Gurgaon Experiment, etc.)

Week-4

8-Apr-24 do

11-Apr-24 do

12-Apr-24 Post-independence era (Etawah Pilot Project, Nilokheri Experiment, etc.)

Week-5

15-Apr-24 Various extension/ agriculture development programmes launched by ICAR/Govt. of India

18-Apr-24 do

19-Apr-24 New trends in agriculture extension: privatization extension, cyber extension/ e-extension, farmer-led extension, expert systems, etc

Week-6

22-Apr-24 do

25-Apr-24 Rural Development: concept, meaning, definition;

26-Apr-24 Various rural development programmes launched by Govt. of India

Week-7

29-Apr-24 Community Dev.-meaning, definition, concept & principles,

1-May-24 Philosophy of C.D.

2-May-24 Rural Leadership: concept and definition,

Week-8

6-May-24 Types of leaders in rural context; extension administration: meaning and concept, principles and functions.

9-May-24 do

10-May-24 Monitoring and evaluation: concept and definition, monitoring and evaluation of extension programmes;

Week-9

13-May-24 do

16-May-24 transfer of technology: concept and models, capacity building of extension personnel

17-May-24 extension teaching methods: meaning, classification, individual, group

Week-10

20-May-24 do

23-May-24 And mass contact methods, ICT Applications in TOT (New and Social Media),

24-May-24 do

Week-11

27-May-24 Media mix strategies;

30-May-24 Communication: meaning and definition;

31-May-24 do

Week-12

3-Jun-24 Principles and Functions of Communication,

6-Jun-24 do

7-Jun-24 Models and barriers to communication.

Week-13

10-Jun-24 do

13-Jun-24 Agriculture journalism;

14-Jun-24 do

Week-14

17-Jun-24 Diffusion and adoption of innovation

20-Jun-24 Concept and meaning, process

21-Jun-24 Stages of adoption, adopter categories

Revision

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Ms. Sunitha Fogat

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Fundamentals of Plant Pathology

Semester - 2nd

Subject Code - 23BSAG-207

Week-1

23-Mar-24 Introduction: Importance of plant diseases, scope

Week-2

26-Mar-24

27-Mar-24

History of Plant Pathology with special reference to Indian work

29-Mar-24

Terms and concepts in Plant Pathology

Week-3

2-Apr-24

Pathogenesis. Causes/factors affecting disease development: disease triangle and tetrahedron and classification of plant diseases

3-Apr-24

Important plant pathogenic organisms, different groups: fungi, bacteria, fastidious vesicular bacteria,

5-Apr-24

do

Week-4

9-Apr-24

phytoplasmas, spiroplasmas, viruses, viroids, algae, protozoa

10-Apr-24

phanerogamic parasites and nematodes with examples of diseases caused by them

12-Apr-24

Diseases and symptoms due to abiotic causes.

Week-5

16-Apr-24

do

17-Apr-24

Fungi: general characters, definition of fungus, somatic structures

19-Apr-24

types of fungal thalli, fungal tissues, modifications of thallus, reproduction (asexual and sexual)

Week-6

23-Apr-24

Nomenclature, Binomial system of nomenclature, rules of nomenclature, classification of fungi.

24-Apr-24

do

26-Apr-24

Key to divisions, sub-divisions, orders and classes.

Week-7

30-Apr-24

Bacteria and mollicutes: general morphological characters

1-May-24

Basic methods of classification and reproduction.

3-May-24

Viruses: nature, structure, replication and transmission.

Week-8

7-May-24

Study of phanerogamic plant parasites

8-May-24

Nematodes: General morphology and reproduction, classification, symptoms

10-May-24

nature of damage caused by plant nematodes (Heterodera, Meloidogyne, Anguina, Radopholus etc.).

Week-9

14-May-24

Growth and reproduction of plant pathogens

15-May-24

do

17-May-24

Liberation / dispersal and survival of plant pathogens.

Week-10

21-May-24

do

23-May-24

Types of parasitism and variability in plant pathogens.

24-May-24

do

Week-11

28-May-24

Pathogenesis

29-May-24

do

31-May-24

Role of enzymes, toxins

Week-12

4-Jun-24

growth regulators in disease development

5-Jun-24

do

7-Jun-24

Defense mechanism in plants

Week-13

11-Jun-24

do

12-Jun-24

Epidemiology

14-Jun-24

do

Week-14

18-Jun-24

Factors affecting disease development.

19-Jun-24

do

21-Jun-24

do

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NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Dr. Savita

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Fundamentals of Entomology

Semester - 2nd

Subject Code - 23BSAG-208

Week-1

23-Mar-24 History of Entomology in India. Major points related to dominance of Insecta in Animal kingdom

Week-2

28-Mar-24 Classification of phylum Arthropoda upto classes. Relationship of class Insecta with other classes of Arthropoda

29-Mar-24 do-

30-Mar-24 do-

Week-3

4-Apr-24 Morphology: Structure and functions of insect cuticle and molting. Body segmentation.

5-Apr-24 do-

Week-4

11-Apr-24 Structure of Head, thorax and abdomen. Structure and modifications of insect antennae, mouth parts, legs

12-Apr-24 do-

13-Apr-24 do-

Week-5

18-Apr-24 Wing venation, modifications and wing coupling apparatus. Structure of male and female genital organ

19-Apr-24 do-

Week-6

25-Apr-24 Metamorphosis and diapause in insects. Types of larvae and pupae. Structure and functions of digestive, circulatory, excretory

26-Apr-24 do-

27-Apr-24 do-

Week-7

2-May-24 Respiratory, nervous, secretory (Endocrine) and reproductive system, in insects. Types of reproduction in insects.

3-May-24 do-

Week-8

9-May-24 Major sensory organs like simple and compound eyes, chemoreceptor.

10-May-24 do-

11-May-24 do-

Week-9

16-May-24 Insect Ecology: Introduction, Environment and its components. Effect of abiotic factors & biotic factors

17-May-24 do-

Week-10

23-May-24 Systematics: Taxonomy – importance, history and development and binomial nomenclature.

24-May-24 do-

25-May-24 do-

Week-11

30-May-24 Definitions of Biotype, Sub- species, Species, Genus, Family and Order. Classification of class Insecta upto Orders

31-May-24 do-

Week-12

6-Jun-24 Basic groups of present day insects with special emphasis to orders and families of Agricultural importance

7-Jun-24 Orthoptera: Acrididae, Tettigonidae, Gryllidae, Gryllotalpidae; Dictyoptera: Mantidae, Blattidae; Odonata;

8-Jun-24 Isoptera: Termitidae; Thysanoptera: Thripidae; Hemiptera: Pentatomidae, Coreidae, Cimicidae, Pyrrhocoridae, Lygaeidae,

Week-13

13-Jun-24 Cicadellidae, Delphacidae, Aphididae, Coccidae, Lophophidae, Aleurodidae, Pseudococcidae

14-Jun-24 Neuroptera: Chrysopidae; Lepidoptera: Pieridae, Papilionidae, Noctuidae, Sphingidae, Pyralidae, Gelechiidae, Arctiidae, Saturnidae, Bombycidae;

Week-14

20-Jun-24 Coleoptera: Coccinellidae, Chrysomelidae, Cerambycidae, Curculionidae, Bruchidae, Scarabaeidae

21-Jun-24 Hymenoptera: Tenthredinidae, Apidae. Trichogrammatidae, Ichneumonidae, Braconidae, Chalcididae

22-Jun-24 Diptera: Cecidomyiidae, Tachinidae, Agromyziidae, Culicidae, Muscidae, Tephritidae

Revision

GDC Memorial College, Bahal (Bhiwani)

NAAC Accredited Grade "B"

Lesson Plan- March to June 2024

Name - Mr. Ram Ghanghas

Department - Agriculture

Class - B.Sc. (hons.) agri.

Subject - Statistical Methods

Semester - 2nd

Subject Code - 23 BSAG-209

Week-2	
25-Mar-24	Introduction to Statistics and its Applications in Agriculture,
27-Mar-24	Graphical Representation of Data
28-Mar-24	do
Week-3	
1-Apr-24	Measures of Central Tendency & Dispersion
3-Apr-24	do
4-Apr-24	do
Week-4	
8-Apr-24	Definition of Probability, Addition and Multiplication Theorem (without proof)
10-Apr-24	do
11-Apr-24	Simple Problems Based on Probability
Week-5	
15-Apr-24	do
17-Apr-24	Binomial & Poisson Distributions
18-Apr-24	do
Week-6	
22-Apr-24	Definition of Correlation, Scatter Diagram
24-Apr-24	do
25-Apr-24	Karl Pearson's Coefficient of Correlation
Week-7	
29-Apr-24	do
1-May-24	Linear Regression Equations
2-May-24	do
Week-8	
6-May-24	Introduction to Tests of Significance, One sample & two sample test t for Means
8-May-24	do
9-May-24	do
Week-9	
13-May-24	Chi-Square Test of Independence of Attributes in 2 × 2 Contingency Table
15-May-24	do
16-May-24	do
Week-10	
20-May-24	Introduction to Analysis of Variance, Analysis of One Way Classification
22-May-24	do
23-May-24	do
Week-11	
27-May-24	Introduction to Sampling Methods
29-May-24	do
30-May-24	do
Week-12	
3-Jun-24	Sampling versus Complete Enumeration
5-Jun-24	do
6-Jun-24	do
Week-13	
10-Jun-24	Simple Random Sampling with and without replacement
12-Jun-24	do
13-Jun-24	do
Week-14	
17-Jun-24	Use of Random Number Tables for selection of Simple Random Sample
19-Jun-24	do
20-Jun-24	do

Revision