

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotech.)

Subject- Botany

Paper- I (Biology and Diversity of Seed Plants-I)

| | |
|---|---|
| August, 2023 1st Week 1 Aug - 2 Aug | Introduction and general account of evolution of Plants General characteristics of Gymnosperms |
| 6 Aug, 2023 | Sunday |
| 2nd Week 7 Aug - 9 Aug | General characteristics of Gymnosperms Important Gymnosperms in India |
| 13 Aug, 2023 | Sunday |
| 3rd Week 14 & 16 Aug | Classification of Gymnosperms with special emphasis on Pilger and Melchior's system of Classification General characters of different orders and their important members |
| 15 Aug, 2023 20 Aug, 2023 | Independence Day Sunday |
| 4th Week 21 Aug - 23 Aug | Morphology and anatomy of root, stem, rachis and leaf/leaflet of <i>Cycas</i> |
| 27 Aug, 2023 | Sunday |
| 5th Week 28 & 29 Aug | Morphology and anatomy of reproductive parts of <i>Cycas</i> |
| 30 Aug, 2023 | Raksha Bandhan |

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Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotech.)

Subject- Botany

Paper- I (Biology and Diversity of Seed Plants-I)

| | |
|--|---|
| September, 2023 1 st Week | Class Test |
| 3 Sept, 2023 | Sunday |
| 2 nd Week 4 & 6 Sept | Morphology and anatomy of reproductive parts including mode of reproduction of <i>Cycas</i> Life-cycle and Economic Importance of <i>Cycas</i> |
| 5 Sept, 2023 7 Sept, 2023 10 Sept, 2023 | Talent Show Janamashtami Sunday |
| 3 rd Week 11 -13 Sept | Morphology and anatomy of root, stem leaf/leaflet of <i>Pinus</i> |
| 17 Sept, 2023 | Sunday |
| 4 th Week 18 - 20 Sept | Morphology and anatomy of reproductive parts including mode of reproduction of <i>Pinus</i> |
| 23 Sept, 2023 24 Sept, 2023 25 Sept, 2023 | Shaheedi Diwas/Haryana War Heroes' Martyrdom Day Sunday Annual Prize Distribution Function |
| 5 th Week 26 - 27 Sept | Revision of morphology and anatomy of reproductive parts including mode of reproduction of <i>Pinus</i> Life cycle and Economic Importance of <i>Pinus</i> |

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(August - December)

Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotech.)

Subject- Botany

Paper- I (Biology and Diversity of Seed Plants-I)

| | |
|---|---|
| October, 2023 1 Oct, 2023 2 Oct, 2023 | Sunday Mahatama Gandhi Jayanti |
| 1st Week 3 – 4 Oct | Morphology and anatomy of root, stem leaf/leaflet of <i>Ephedra</i> |
| 8 Oct, 2023 | Sunday |
| 2nd Week 9 - 11 Oct | Morphology and anatomy of reproductive parts including mode of reproduction of <i>Ephedra</i> Life Cycle and Economic Importance of <i>Ephedra</i> |
| 15 Oct, 2023 | Maharaja Agrasen Jayanti, Sunday |
| 3rd Week 16 - 18 Oct | Palaeobotany- Fossils, fossilization process and Types of Fossils |
| 22 Oct, 2023 | Sunday |
| 4th Week 23 & 25 Oct | Geological Time Table Reconstruction of the fossil Gymnosperms: <i>Lyginopteris</i> , <i>Williamsonia</i> and <i>Cycadeoidea</i> |
| 24 Oct, 2023 28 Oct, 2023 29 Oct, 2023 | Dussehra Maharishi Valmiki Jayanti Sunday |
| 5th Week 30 & 31 Oct | Reconstruction of the fossil Gymnosperms: <i>Lyginopteris</i> , <i>Williamsonia</i> and <i>Cycadeoidea</i> Evolution of Seed Habit |
| 25 Oct – 4 Nov, 2023 | Sessional Exams |

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Class- B.Sc. II (Medical and Biotech.)

Subject- Botany

Paper- I (Biology and Diversity of Seed Plants-I)

| | |
|---|---|
| November, 2023 1st Week 1 Nov, 2023 5 Nov, 2023 | Haryana Day Sunday |
| 2nd Week 6 - 8 Nov | General characters of Angiosperms including primitive Angiosperms Revision |
| 10 Nov - 16 Nov, 2023 | Diwali Break |
| 19 Nov, 2023 | Sunday |
| 4th Week 20 - 22 Nov | Revision, Class Tests and Practice of Diagrams |
| 5th Week 25 Nov, 2023 Onwards | University Examination |

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Lesson Plan for the Odd Semester, 2023 (August - December)

Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotechnology)

Subject- Botany

Paper- II (Plant Anatomy)

| | |
|--|--|
| August, 2023 1 st Week 3 Aug - 5 Aug | Diversity in Plant Forms: Annuals, Biennials and Perennials |
| 6 Aug, 2023 | Sunday |
| 2 nd Week 10 Aug -12 Aug | Meristematic Tissues: Characters, Classification, Functions |
| 13 Aug, 2023 | Sunday |
| 3 rd Week 17Aug-19 Aug | Permanent Tissues (Simple and Complex): Characters, Classification, Origin, Distribution and Functions |
| 15 Aug, 2023 20 Aug, 2023 | Independence Day Sunday |
| 4 th Week 24 Aug - 26 Aug | Epidermis and Epidermal Appendages Root system: Primary and Secondary functions of Roots |
| 27 Aug, 2023 | Sunday |
| 5 th Week 31Aug | Root system, Histological organization of Monocot and Dicot Root |
| 30 Aug, 2023 | Raksha Bandhan |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotechnology)

Subject- Botany

Paper- II (Plant Anatomy)

| | |
|--|---|
| September, 2023 1 st Week 1 Sept - 2 Sept | Secondary growth in Dicot Root Structural modification in Roots: Storage Roots of <i>Beta vulgaris</i> |
| 3 Sept, 2023 | Sunday |
| 2 nd Week 8 Sept & 9 Sept | Structural modification in roots: Respiratory Roots of <i>Sonneretia</i> and Epiphytic Roots of <i>Vanda</i> |
| 5 Sept, 2023 7 Sept, 2023 10 Sept, 2023 | Talent Show Janamashtami Sunday |
| 3 rd Week 14 Sept-16 Sept | The Shoot System: Shoot apical meristem and its histological organizations Monocot and Dicot stem |
| 17 Sept, 2023 | Sunday |
| 4 th Week 21 Sept - 22 Sept | Cambium –Structure and Functions Secondary growth in Dicot stem, Growth rings, Sap wood and Heart wood, Periderm |
| 23 Sept, 2023 24 Sept, 2023 25 Sept, 2023 | Shaheedi Divas/Haryana War Heroes' Martyrdom Day Sunday Annual Prize Distribution Function |
| 5 th Week 28 Sept - 30 Sept | Anomalous secondary growth: <i>Dracaena</i> , <i>Boerhaavia</i> and <i>Achyranthes</i> |

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Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotechnology)

Subject- Botany

Paper- II (Plant Anatomy)

| | |
|---|---|
| October, 2023 1 Oct, 2023 2 Oct, 2023 | Sunday Mahatama Gandhi Jayanti |
| 1st Week 5 Oct – 7 Oct | Types of Leaves (Simple and Compound) Primary and Secondary Functions of Leaves; Phyllotaxy Anatomy of Monocot and Dicot Leaves |
| 8 Oct, 2023 | Sunday |
| 2nd Week 12 Oct - 14 Oct | Cell inclusions in Leaves and Leaf abscission Stomatal apparatus and their morphological types |
| 15 Oct, 2023 | Maharaja Agrasen Jayanti, Sunday |
| 3rd Week 19 Oct - 21 Oct | Leaf Adaptations in some Xerophytic and Halophytic Plants |
| 22 Oct, 2023 | Sunday |
| 4th Week 26 Oct – 27 Oct | Comparative account of Monocots and Dicots |
| 24 Oct, 2023 28 Oct, 2023 29 Oct, 2023 | Dussehra Maharishi Valmiki Jayanti Sunday |
| 25 Oct – 4 Nov, 2023 | Sessional Exams |

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(August - December)

Name of the Teacher– Dr. Nadia Chowhan

Class- B.Sc. II (Medical and Biotechnology)

Subject- Botany

Paper- II (Plant Anatomy)

| | |
|---|--|
| November, 2023 1st Week 1 Nov, 2023 5 Nov, 2023 | Haryana Day Sunday |
| 2nd Week 9 Nov | Practice of Drawing Diagrams |
| 10 Nov - 16 Nov, 2023 | Diwali Break |
| 3rd Week 17 Nov - 18 Nov | Revision of Syllabus, Class Tests and Practice of Drawing Diagrams |
| 19 Nov, 2023 | Sunday |
| 4th Week 23 Nov - 24 Nov | Revision of Syllabus, Class Tests and Practice of Drawing Diagrams |
| 5th Week 25 Nov, 2023 Onwards | University Examination |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical and Biotech.)

Subject- Botany

Paper-I (Plant Physiology)

| | |
|---|--|
| August, 2023 1st Week 1 Aug - 2 Aug | General Introduction to syllabus Plant- Water Relation Importance of water and property of water |
| 6 Aug, 2023 | Sunday |
| 2nd Week 7 Aug - 9 Aug | Imbibition, Diffusion, Osmosis, Water Potential and diffusion Pressure Deficit Plasmolysis |
| 13 Aug, 2023 | Sunday |
| 3rd Week 14 and 16 Aug | Absorption and transport of water Transpiration and its types Physiology of stomata |
| 15 Aug, 2023 20 Aug, 2023 | Independence Day Sunday |
| 4th Week 21 Aug - 23 Aug | Factors affecting transpiration and its importance, Guttation Ascent of Sap |
| 27 Aug, 2023 | Sunday |
| 5th Week 28 and 29 Aug | Essential of Macro and Micro elements and their role in plants |
| 30 Aug, 2023 | Raksha Bandhan |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical and Biotech.)

Subject- Botany

Paper- I (Plant Physiology)

| | |
|--|---|
| September 3, 2023 | Sunday |
| 2nd Week 4 and 6 Sept | Mineral uptake and deficiency symptoms |
| 5 Sept, 2023 7 Sept, 2023 10 Sept, 2023 | Talent Show Janamashtami Sunday |
| 3rd Week 11 -13 Sept | Mechanism of phloem transport Source-sink relationship Class Test |
| 17 Sept, 2023 | Sunday |
| 4th Week 18 - 20 Sept | Introduction of photosynthesis, Photosynthetic pigments Action Spectra and Enhancement effects, Concept of two photosystems |
| 23 Sept, 2023 24 Sept, 2023 25 Sept, 2023 | Shaheedi Divas/Haryana War Heroes' Martyrdom Day Sunday Annual Prize Distribution Function |
| 5th Week 26 - 27 Sept | Z-scheme Photo-phosphorylation Calvin cycle |

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Lesson Plan for the Odd Semester, 2023 (August - December)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical and Biotech.)

Subject- Botany

Paper- I (Plant Physiology)

| | |
|---|--|
| October, 2023 1 Oct, 2023 2 Oct, 2023 | Sunday Mahatama Gandhi Jayanti |
| 1st Week 3 – 4 Oct | C4 Cycle, CAM plants, Photorespiration and Blackmann’s Law of Limiting Factors |
| 8 Oct, 2023 | Sunday |
| 2nd Week 9 - 11 Oct | Introduction of Respiration Aerobic and Anaerobic respiration Kreb cycle |
| 15 Oct, 2023 | Maharaja Agrasen Jayanti, Sunday |
| 3rd Week 16 - 18 Oct | Electron transport mechanism Oxidative phosphorylation Pentose phosphate pathway |
| 22 Oct, 2023 | Sunday |
| 4th Week 23 and 25 Oct | Seed germination and Seed dormancy |
| 24 Oct, 2023 28 Oct, 2023 29 Oct, 2023 | Dussehra Maharishi Valmiki Jayanti Sunday |
| 5th Week 30 and 31 Oct | Senescence, Fruit Ripening and Photoperiodism |
| 25 Oct – 4 Nov, 2023 | Sessional Exams |

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Name of the Teacher - Dr. Seema Sharma

Class- B.Sc. III (Medical and Biotech.)

Subject- Botany

Paper- I (Plant Physiology)

| | |
|---|---|
| November, 2023 1st Week 1 Nov, 2023 5 Nov, 2023 | Haryana Day Sunday |
| 2nd Week 6 - 8 Nov | Physiology of flowering and Florigen concept Plant movements |
| 10 Nov – 16 Nov, 2023 | Diwali Break |
| 19 Nov, 2023 | Sunday |
| 4th Week 20 - 22 Nov | Revision of Syllabus and Class Tests |
| 5th Week 25 Nov, 2023 Onwards | University Examination |

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Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II: Ecology

| | |
|--|---|
| August, 2023 1 st Week 3 Aug - 5 Aug | Introduction to syllabus and Scheme of Examination Introduction to Ecology- Definition, Scope and Importance; Levels of Organisation |
| 6 Aug, 2023 | Sunday |
| 2 nd Week 10 Aug -12 Aug | Environmental Factors- Climate (Water, Humidity) Light, Temperature |
| 13 Aug, 2023 | Sunday |
| 3 rd Week 17Aug-19 Aug | Edaphic Factors- Soil Profile, Physio-chemical properties Topographic factors |
| 15 Aug, 2023 20 Aug, 2023 | Independence Day Sunday |
| 4 th Week 24 Aug - 26 Aug | Biotic Factors (species interaction) Adaptations to Water stress & Salinity in Xerophytes (Morphology) |
| 27 Aug, 2023 | Sunday |
| 5 th Week 31Aug | Adaptations to Water stress & Salinity in Xerophytes (Anatomy) |
| 30 Aug, 2023 | Raksha Bandhan |

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Name of the Teacher – Dr. Seema Sharma

Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II: Ecology

| | |
|--|---|
| September, 2023 1 st Week 1 Sept - 2 Sept | Adaptations to Water stress & Salinity in Hydrophytes |
| 3 Sept, 2023 | Sunday |
| 2 nd Week 8 Sept - 9 Sept | Population Ecology- Concept, Characteristics Biotic Potential, Growth curves, Ecotypes and Ecads |
| 5 Sept, 2023 7 Sept, 2023 10 Sept, 2023 | Talent Show Janamastami Sunday |
| 3 rd Week 14 Sept-16 Sept | Community Ecology- Concepts, Characteristics Methods of Analysis Class Test |
| 17 Sept, 2023 | Sunday |
| 4 th Week 21 Sept - 22 Sept | Ecological succession |
| 23 Sept, 2023 24 Sept, 2023 25 Sept, 2023 | Shaheedi Divas/Haryana War Heroes' Martyrdom Day Sunday Annual Prize Distribution Function |
| 5 th Week 28 Sept - 30 Sept | Ecosystem: Structure and Functions (trophic level, food chain) Ecosystem: Functions (Food web, Energy flow, Ecological pyramids) |

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Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II: Ecology

| | |
|---|---|
| October, 2023 1 Oct, 2023 2 Oct, 2023 | Sunday Mahatama Gandhi Jayanti |
| 1st Week 5 Oct – 7 Oct | Biogeochemical Cycle: Carbon Cycle Nitrogen Cycle & Water Cycle |
| 8 Oct, 2023 | Sunday |
| 2nd Week 12 Oct - 14 Oct | Phyto-geography regions of India Vegetation types of India (Forests) |
| 15 Oct, 2023 | Maharaja Agrasen Jayanti, Sunday |
| 3rd Week 19 Oct - 21 Oct | Environmental Pollution- Air Pollution: Sources, types and control |
| 22 Oct, 2023 | Sunday |
| 4th Week 26 Oct – 27 Oct | Water Pollution: Sources, types and control |
| 24 Oct, 2023 28 Oct, 2023 29 Oct, 2023 | Dussehra Maharishi Valmiki Jayanti Sunday |
| 25 Oct – 4 Nov, 2023 | Sessional Exams |

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Class- B.Sc. III (Medical & Biotech.)

Subject- Botany

Paper- II: Ecology

| | |
|---|---|
| November, 2023 1st Week 1 Nov, 2023 5 Nov, 2023 | Haryana Day Sunday |
| 2nd Week 9 Nov | Global Change- Greenhouse Effect, impacts of global warming |
| 10 Nov - 16 Nov, 2023 | Diwali Break |
| 3rd Week 17 Nov - 18 Nov | Carbon trading Revision of Syllabus and Class Tests |
| 19 Nov, 2023 | Sunday |
| 4th Week 23 Nov - 24 Nov | Revision of Syllabus and Class Tests |
| 5th Week 25 Nov, 2023 Onwards | University Examination |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023 (August - December)

Name of the Teacher – New Teacher

Class- B.Sc. I (Life Sciences)

Subject- Botany

Paper- Diversity of Microbes, Algae, Fungi and Archegoniates

| | |
|--|---|
| August, 2023 1 st Week 1 - 2 Aug | Bacteria: Structure, nutrition, reproduction, and economic importance |
| 6 Aug, 2023 | Sunday |
| 2 nd Week 7 Aug - 9 Aug | Viruses: General account of viruses including structure of TMV and Bacteriophage. |
| 13 Aug, 2023 | Sunday |
| 3 rd Week 14 and 16 Aug | Algae: General characters, Introductory classification; economic importance Life cycle of <i>Nostoc</i> |
| 15 Aug, 2023 20 Aug, 2023 | Independence Day Sunday |
| 4 th Week 21 Aug - 23 Aug | Life-cycle of <i>Volvox</i> (Chlorophyceae) Life-cycle of <i>Vaucheria</i> (Xanthophyceae) Life-cycle of <i>Ectocarpus</i> (Phaeophyceae) |
| 27 Aug, 2023 | Sunday |
| 5 th Week 28 and 29 Aug | Life-cycle of <i>Polysiphonia</i> (Rhodophyceae). Fungi: General characters, Introductory classification; Economic Importance |
| 30 Aug, 2023 | Raksha Bandhan |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023 (August - December)

Name of the Teacher – New Teacher

Class- B.Sc. I (Life Sciences)

Subject- Botany

Paper- Diversity of Microbes, Algae, Fungi and Archegoniates

| | |
|--|--|
| 3 Sept, 2023 | Sunday |
| 2nd Week 4 and 6 Sept | Life-history of <i>Phytophthora</i> (Mastigomycotina) Life-history of <i>Penicillium</i> (Ascomycotina) |
| 5 Sept, 2023 7 Sept, 2023 10 Sept, 2023 | Talent Show Janamashtami Sunday |
| 3rd Week 11 -13 Sept | Life-history of <i>Puccinia</i> (Basidiomycotina) Life-history of <i>Colletotrichum</i> (Deuteromycotina) |
| 17 Sept, 2023 | Sunday |
| 4th Week 18 - 20 Sept | General account of Lichens, Types, Ecological and Economic importance Bryophyta: General characteristics, Classification upto Classes, Alternation of Generation Structure and reproduction of <i>Marchantia</i> (Hepatocopsida) |
| 23 Sept, 2023 24 Sept, 2023 25 Sept, 2023 | Shaeeedi Divas/Haryana War Heroes' Martyrdom Day Sunday Annual Prize Distribution Function |
| 5th Week 26 - 27 Sept | Structure and reproduction of <i>Anthoceros</i> (Anthocerotopsida) Structure and reproduction of <i>Funaria</i> (Bryopsida) |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023 (August - December)

Name of the Teacher – New Teacher

Class- B.Sc. I (Life Sciences)

Subject- Botany

Paper- Diversity of Microbes, Algae, Fungi and Archegoniates

| | |
|---|--|
| October, 2023 1 Oct, 2023 2 Oct, 2023 | Sunday Mahatama Gandhi Jayanti |
| 1st Week 3 – 4 Oct | Ecological and economic importance of Bryophytes Pteridophyta: General characters, Classification upto classes |
| 8 Oct, 2023 | Sunday |
| 2nd Week 9 - 11 Oct | Structure and reproduction of <i>Rhynia</i> Structure and reproduction of <i>Selaginella</i> |
| 15 Oct, 2023 | Maharaja Agrasen Jayanti, Sunday |
| 3rd Week 16 - 18 Oct | Structure and reproduction of <i>Equisetum</i> Structure and reproduction of <i>Pteris</i> |
| 22 Oct, 2023 | Sunday |
| 4th Week 23 and 25 Oct | Heterospory and seed habit, Stellar evolution, Ecological and economic Importance Gymnosperms: General characteristics, Classification upto classes |
| 24 Oct, 2023 28 Oct, 2023 29 Oct, 2023 | Dussehra Maharishi Valmiki Jayanti Sunday |
| 5th Week 30 and 31 Oct | Anatomy and Reproduction of <i>Cycas</i> |
| 25 Oct – 4 Nov, 2023 | Sessional Exams |

KVA DAV College for Women, Karnal

Lesson Plan for the Odd Semester, 2023

(August - December)

Name of the Teacher – New Teacher

Class- B.Sc. I (Life Sciences)

Subject- Botany

Paper- Diversity of Microbes, Algae, Fungi and Archegoniatas

| | |
|---|--|
| November, 2023 1st Week 1 Nov, 2023 5 Nov, 2023 | Haryana Day Sunday |
| 2nd Week 6 - 8 Nov | Anatomy and reproduction of <i>Pinus</i> Anatomy of <i>Ephedra</i> |
| 10 Nov - 16 Nov, 2023 | Diwali Break |
| 19 Nov, 2023 | Sunday |
| 4th Week 20 - 22 Nov | Reproduction of <i>Ephedra</i> Distribution and economic importance; General account of paleobotany and Geological time scale Revision of Syllabus |
| 5th Week 25 Nov, 2023 Onwards | University Examination |