

# Govt. College BCGCW NCH

## Lesson Plan (2023-2024)

Name of the Assistant/Associate Professor- Dr. Akhilesh Kumar

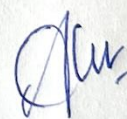
Sem- III<sup>rd</sup>

Class- B.Sc. (M)

Subject-

Botany-BOT-3.1

Month	Topics
21 <sup>st</sup> July, 2023 to 31 <sup>st</sup> July, 2023	General characters, origin and evolution of Gymnosperms Geological Time Table;
1 <sup>st</sup> August, 2023 to 31 <sup>st</sup> August, 2023	Evolution of Seed Habit. Pilger and Melchior's (1954) system of classification of Gymnosperms. Palaeobotany- Fossils and Fossilization (Process involved, types of fossils and importance of fossils);
1 <sup>st</sup> Sept., 2023 To 30 Sept., 2023	Reconstruction of the following fossil plants: Lyginopteris, Williamsonia and Cycadeoidea (= Bennettites)
1 <sup>st</sup> Oct, 2023 To 31 Oct, 2023	Morphology and anatomy of root, stem, leaf/leaflet and reproductive parts including mode of reproduction, life-cycle and economic importance of following plants: Cycas Pinus
1 <sup>st</sup> Nov, 2023 To 24 <sup>th</sup> Nov, 2023	Morphology and anatomy of root, stem, leaf/leaflet and reproductive parts including mode of reproduction, life-cycle and economic importance of Ephedra Economic importance of Gymnosperms General characters, origin and evolution of Angiosperms





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## Lesson Plan (2023-2024)

Name of the Assistant/Associate Professor- Dr. Akhilesh Kumar

Sem- V<sup>th</sup>

Class- B.Sc. (M)

Subject-

Botany-BOT-5.1

Month	Topics
21 <sup>st</sup> July, 2023 to 31 <sup>st</sup> July, 2023	Plant-water relations: Importance of water to plant life; physical properties of water; imbibition, diffusion and osmosis; absorption and transport of water;
1 <sup>st</sup> August, 2023 to 31 <sup>st</sup> August, 2023	Transpiration; physiology of stomata. Mineral nutrition: Essential macro and micro elements and their role; mineral uptake; deficiency symptoms. Transport of organic substances: Mechanism of phloem transport; source-sink relationship; factors affecting translocation.
1 <sup>st</sup> Sept., 2023 To 30 Sept., 2023	Photosynthesis : significance; historical aspects; photosynthetic pigments; action spectra and enhancement effects; concept of two photosystems; Z-scheme; photo- phosphorylation; Calvin cycle; C4 pathway; CAM plants; photorespiration.
1 <sup>st</sup> Oct, 2023 To 31 Oct, 2023	Growth and development : Definitions; phases of growth and development; seed dormancy; plant movements; the concept of photoperiodism; physiology of flowering; florigen concept; physiology of senescence; fruit ripening;
1 <sup>st</sup> Nov, 2023 To 24 <sup>th</sup> Nov, 2023	Plant hormones- auxins, gibberellins, cytokinins, abscissic acid and ethylene, history of their discovery, mechanism of action; photo-morphogenesis; Phytochromes and their discovery, physiological role and mechanism of action.

