



B. Sc. (Botany) SEMESTER-II

Paper-I

(Palaeobotany, Pteridophyta, Gymnosperms and Soil Analysis)

UNIT-I

Palaeobotany:

1. **Palaeobotany:** Definition; fossil and (Pseudo-fossil)

https://youtu.be/_jOQExLik3E?si=ptCu4ppCC-RNw53-

2. Importance of fossils.

<https://youtu.be/Sfqo7XhPRCo?si=fgUYlcnFd931qpR0>

3. **Types of fossils:** Compression, Impression, Cast-Mold, Petrification and Amber.

<https://youtu.be/dfu656kKNtw?si=Lt6786TO5MJF8r5L>

3. **Geological time scale:** Definition, Outline and brief account of Eras

<https://youtu.be/YPoODELdSA4?si=Iav9gMGV3SPZtwyZ>

4. **Fossil leaf:** Glossopteris, Fructification: Scutum

<https://youtu.be/X8w8VkufKcY?si=9Tva6uyH1efr7VSA>

UNIT-II

Pteridophytes:

1. **Pteridophyta:** General characteristics

<https://youtu.be/VA2LNWkZNWo?si=63feM6eqbf17a2Hj>

Classification (Smith, 1952)

<https://youtu.be/DH65cGLvLws?si=IN1G9slOXhMFfXGY>

2. **Fossil Pteridophyte:** Rhynia

<https://youtu.be/5hDBBCDhQNE?si=Ih8BX9QfiPVwTSWt>

3. **Life history of:** Selaginaella

https://youtu.be/MxRINmAbAPs?si=d_5p4JieMXtI8ynd

and Equisetum

https://youtu.be/IV4Sx2EAg58?si=D9Wu94cTC_sD5F6z

Heterospory and seed habit



https://youtu.be/WZsRJuwIAoo?si=bjmhk425JTJ7i_J4

Brief account of types of steles

<https://youtu.be/TWFluCi1bxU?si=l3nP5J13CKE-yX7u>

UNIT-III

Gymnosperms:

1. **Gymnosperms:** General characteristics

<https://youtu.be/zDUCacewuAg?si=exQwIZhxDduFX419>

Classification (Steward, 1982). Economic Importance

<https://youtu.be/74FKPpOB7sg?si=EtmitJvUMEfI0e6g>

2. **Fossil Gymnosperms:** Cycadeoidea flower

https://youtu.be/D8mc42a5_qk?si=FyiNIHOEpccCMNox

3. **Life cycle of:** Cycas

https://youtu.be/v-V0oYln0No?si=p3u_i9rYGJpn_F3W

https://youtu.be/F7q8I7WP1IQ?si=fsudsh_4ix-e8e5c

<https://youtu.be/XI8Qhij13wk?si=gR0dydbFkUfJuapG>

and Pinus https://youtu.be/BHtfJnEzy1Q?si=sq_eufWJLd2_S_s1

<https://youtu.be/0Uf-xZwnfXg?si=Bk3qcJRCUAIrAh7t>

<https://youtu.be/ohj3IYQVrOc?si=HW9e2Viq41aia7z6>

<https://youtu.be/e225dOyRPHg?si=CM5Bz5cqoJPJK-rD>

UNIT-IV

Skill Development: Soil analysis:

1. **Soil:** Types of soil

https://youtu.be/bGm1glRWXLg?si=YM6Coe1kWYL_sLko

method of collection of soil samples.

<https://youtu.be/loeUDJgLZAg?si=ydUuc9bBmEicBmSg>

2. **Physical properties of soil:** Soil texture

https://youtu.be/MblIJFt4PN8?si=G_oHFZMbG7d52f-G

soil colour

<https://youtu.be/0fNzR2hTlaw?si=Y2iARyNLcmY9QtB5>

Water Holding Capacity (WHC)



<https://youtu.be/bdP2EtSGMPo?si=4FA2N5f8EGoQ1Eot>

Water Rising Capacity (WRC), Bulk Density (BD) and Porosity (P).

<https://youtu.be/r8P1Jqe3UoE?si=5zPMkEIAu-pXHIPY>

3. Chemical properties of soil: pH

<https://youtu.be/jI31r82-IQ4?si=z-fpxoA8RLqXXXQ>

Carbonates as CaCO_3

<https://youtu.be/tlh1-q-cD9o?si=jmDTXa5RDMpgY0xl>

Available Nitrogen

<https://youtu.be/8q179HibOKo?si=Lm8lzyHnwc0-jzYZ>

Available Phosphorous, Available Potassium.

<https://youtu.be/0IfN-w3xQPI?si=iSQshsmliTjFvKDZ>