



## B. Sc. (Botany) SEMESTER-I

### Paper-I

#### (Viruses, Prokaryotes, Algae and Biofertilizer)

##### UNIT-I

**Virus:** Nature of Viruses (Non-living and Living, Characteristics)

<https://youtu.be/vMEE7MBssdk?si=RZnWi6jZKgcuA958>

**Ultrastructure of TMV**

[https://youtu.be/CfrR2suXCNQ?si=3phBc01L3sfNO\\_aA](https://youtu.be/CfrR2suXCNQ?si=3phBc01L3sfNO_aA)

**Structure and Multiplication of T4-Bacteriophage**

<https://youtu.be/DgM9uXM6L38?si=XM38UvvgbnEi1C9g>

**Economic Importance of Viruses**

<https://youtu.be/UJd1ouDDpMY?si=IWj5AQEGsH4QcRYs>

**Mycoplasma:** Properties, Structure and Reproduction

[https://youtu.be/mEF\\_rzgoku4?si=2eEMzqGrHoXu5mmS](https://youtu.be/mEF_rzgoku4?si=2eEMzqGrHoXu5mmS)

**Bacteria:** General Characteristics

<https://youtu.be/-Yl0v2HmMs?si=a5tMgx6FgNghzxsW>

**Ultrastructure of bacterial cell** (with references to their role in Agriculture and industry).

<https://youtu.be/OBej7rFyN7U?si=U4KCdlW-0xix2IZq>

[https://youtu.be/LUI9hNsj9yE?si=8XUleL8Tz6o\\_w5uA](https://youtu.be/LUI9hNsj9yE?si=8XUleL8Tz6o_w5uA)

##### UNIT-II

**Cyanobacteria:** Cell ultrastructure

[https://youtu.be/NXLrmbJkd\\_M?si=3jgVY04-V0QjNhJt](https://youtu.be/NXLrmbJkd_M?si=3jgVY04-V0QjNhJt)

**Structure of Heterocyst**

[https://youtu.be/dy6Dla4WF0E?si=vvZkN\\_r7uQzvbAae](https://youtu.be/dy6Dla4WF0E?si=vvZkN_r7uQzvbAae)

**Structure and Reproduction in *Nostoc***

[https://youtu.be/hVYOrME0Mp4?si=Y3yeb2Dw\\_5Ak6VK8](https://youtu.be/hVYOrME0Mp4?si=Y3yeb2Dw_5Ak6VK8)

**Economic importance of Cyanobacteria**

[https://youtu.be/UhOm4mTkA6E?si=6btLTQ\\_-29FeVY9M](https://youtu.be/UhOm4mTkA6E?si=6btLTQ_-29FeVY9M)

**Algae:** General characteristics



<https://youtu.be/XSkVj-1X74Q?si=QYV3MPNZRW6Tk5vR>

**Classification (Fritsch 1954)**

<https://youtu.be/1P1yggEZm9w?si=Ck71UcLvYPfyGjy0>

**Economic importance of Algae.**

[https://youtu.be/16krqFBGQ\\_I?si=kfbvbyFYsTAoK](https://youtu.be/16krqFBGQ_I?si=kfbvbyFYsTAoK)

### **Unit-III**

**Life cycles in Algae: *Chara***

<https://youtu.be/N-jszKUPPcg?si=z8XOUHff2n4TF6CC>

***Vaucheria***

<https://youtu.be/Yn9khOWJiis?si=zxCRphX5bBJGFfGS>

***Ectocarpus***

[https://youtu.be/LN\\_0y3SIDwo?si=4JcKLWGBeZwR0csY](https://youtu.be/LN_0y3SIDwo?si=4JcKLWGBeZwR0csY)

***Batrachospermum***

<https://youtu.be/5T093Qg5caI?si=jvtc3vJHbKXLunTi>

### **Unit-IV**

**Biofertilizer** : Definition, scope and importance

<https://youtu.be/oHoi9B1Y4Zo?si=-WPPIxXhwYkE6JqC>

**Various Microbes used As Biofertilizers**

[https://youtu.be/mU1tlx0JGM8?si=yg\\_d4rMf3LJRmOOZ](https://youtu.be/mU1tlx0JGM8?si=yg_d4rMf3LJRmOOZ)

**Commercial production of biofertilizers: *Rhizobium***

<https://youtu.be/BXV6Z626vZE?si=9Wj6AUnvivOw05M9>

***Azotobacter***

<https://youtu.be/g-DI9nKcQk4?si=5yV7tBFqT89-ZfCI>

**PSB (Phosphate Solubilizing Bacteria e.g. *Bacillus polymyxa* )**

[https://youtu.be/tSoBcflODw?si=zsw\\_rEFZnUsBqzU](https://youtu.be/tSoBcflODw?si=zsw_rEFZnUsBqzU)

***Azolla***



**DHARAMPETH M. P. DEO MEMORIAL SCIENCE COLLEGE,  
NAGPUR**

---

[https://youtu.be/QtTO0jyxb\\_E?si=AYVPsj9OhgN8IYg5](https://youtu.be/QtTO0jyxb_E?si=AYVPsj9OhgN8IYg5)