



**B. Sc. (MICROBIOLOGY) SEMESTER-IV**

**Paper-I  
(Metabolism)**

**UNIT-I**

General strategy of Metabolism:

<https://youtu.be/wTrmGhCogRk?feature=shared>

EMP Pathway and its regulation:

<https://youtu.be/PK8Lf7N5gIA?feature=shared>

TCA Cycle and its regulation:

<https://youtu.be/6t8hU7hOnF8?feature=shared>

Outline of ED Pathway

<https://youtu.be/twkrslRtegU?feature=shared>

Pentose Phosphate Pathway:

<https://youtu.be/hhd6DSxGthc?feature=shared>

HMP Shunt:

<https://youtu.be/BXSuqyHlBxk?feature=shared>

Phosphoketolase Pathway:

<https://youtu.be/MRvawt4raNc?feature=shared>

**UNIT-II**

Overview of Lipid Metabolism:

<https://youtu.be/CBiP2ptNbUg?feature=shared>

Fatty Acid Synthesis:

<https://youtu.be/vxDSl9XKB1A?feature=shared>



Beta Oxidation of fatty acids Pathway:

[https://youtu.be/ruPRVAQ\\_wrI?feature=shared](https://youtu.be/ruPRVAQ_wrI?feature=shared)

Omega Oxidation of Fatty Acids:

<https://youtu.be/jlCdlzSng8?feature=shared>

Prokaryotic DNA Replication Process Animation:

<https://youtu.be/TNKWgcFPHqw?feature=shared>

Mode of Replication:

<https://youtu.be/gfE5N1OPE1E?feature=shared>

General Features of replication:

<https://youtu.be/ttJV8nKPayg?feature=shared>

Enzyme involved in DNA Replication:

<https://youtu.be/91O0IrjoXQQ?feature=shared>

Prokaryotic Replication Initiation:

<https://youtu.be/gZAw7pahzMM?feature=shared>

Prokaryotic Replication Elongation:

<https://youtu.be/tPT8gYQqVDM?feature=shared>

Prokaryotic Replication Termination:

<https://youtu.be/Q9VeRRKWM3A?feature=shared>

Rolling Circle model of DNA Replication:

<https://youtu.be/u1MIA-rmwlc?feature=shared>

Knife and Fork model of DNA Replication

<https://youtu.be/n0MPXHbeYtg?feature=shared>



Prokaryotic Transcription Process Animation:

<https://youtu.be/WsofH466lqk?feature=shared>

<https://youtu.be/Qqe4thU-os8?feature=shared>

Prokaryotic Transcription Initiation:

<https://youtu.be/hVi6GC4HSeQ?feature=shared>

Prokaryotic Transcription Elongation:

<https://youtu.be/PPDdvLMORJc?feature=shared>

Prokaryotic Transcription Termination:

<https://youtu.be/36zjv-o7rAg?feature=shared>

Reverse Transcription:

<https://youtu.be/kno2m8IDsEw?feature=shared>

### **UNIT-III**

Overview of Amino acid Metabolism:

<https://youtu.be/l0V-Xmps1mE?feature=shared>

Amino acid breakdown:

<https://www.youtube.com/live/MO517iMDckM?feature=shared>

Deamination of amino acid (Alanine, Tyrosine, Methionine):

[https://youtu.be/JF4QAJay\\_nM?feature=shared](https://youtu.be/JF4QAJay_nM?feature=shared)

Metabolic breakdown of individual amino acids( Ala, Arg, Trp, Met):

<https://youtu.be/WRV7PslLmMg?feature=shared>

Glucogenic and Ketogenic amino acids:

<https://youtu.be/a3tabd9zrSY?feature=shared>



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Genetic code:

[https://www.youtube.com/live/\\_uzZSwHc0rQ?feature=shared](https://www.youtube.com/live/_uzZSwHc0rQ?feature=shared)

Prokaryotic Translation Introduction:

<https://youtu.be/gvYJaPvkSZg?feature=shared>

Prokaryotic Translation Process Animation:

<https://youtu.be/7cn10wayDug?feature=shared>

Charging of t-RNA:

<https://youtu.be/Rb9EEK4JZ1w?feature=shared>

Prokaryotic Translation Initiation:

<https://youtu.be/ncT6TLP8WsY?feature=shared>

Prokaryotic Translation Elongation:

<https://youtu.be/OfmRxxObegk?feature=shared>

Prokaryotic Translation Termination:

<https://youtu.be/36zjv-o7rAg?feature=shared>

[https://youtu.be/i7nlpHJD\\_ms?feature=shared](https://youtu.be/i7nlpHJD_ms?feature=shared)

### UNIT-IV

High Energy Molecules:

[https://youtu.be/wR7D3L\\_Tb7s?feature=shared](https://youtu.be/wR7D3L_Tb7s?feature=shared)

Substrate level Phosphorylation:

<https://youtu.be/M5OxA89Zgj4?feature=shared>



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Cyclic and Non-cyclic Photophosphorylation Animation:

<https://youtu.be/IRg9NJAS2Q8?feature=shared>

Cyclic and Non-cyclic Photophosphorylation:

<https://youtu.be/IRg9NJAS2Q8?feature=shared>

Cyclic and Non-cyclic Photophosphorylation:

<https://www.youtube.com/live/a1q9pX9SIIM?feature=shared>

<https://youtu.be/3Q8G1KyWnbc?feature=shared>

Oxidative Phosphorylation:

<https://youtu.be/RR0G9WTVngU?feature=shared>