

DEPTH OF BIOLOGY

B PHARMACY

8TH SEM IMPORTANT QUESTIONS

**CELL & MOLECULAR
BIOLOGY**

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Unit I

10Hours

- a) Cell and Molecular Biology: Definitions theory and basics and Applications.
- b) Cell and Molecular Biology: History and Summation.
- c) Properties of cells and cell membrane.
- d) Prokaryotic versus Eukaryotic
- e) Cellular Reproduction
- f) Chemical Foundations – an Introduction and Reactions (Types)

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10 marks question

- Q1. Definition, theory & basic application of cell & molecular biology
- Q2. Chemical foundation { introduction + reaction }

05 marks question

- Q1. Difference between prokaryotes & eukaryotes
- Q2. Write down the properties of cell & cell membrane
- Q3. Explain cellular reproduction

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2 marks question

- Q1. Define prokaryotes
- Q2. Define eukaryotes
- Q3. What are the properties of cell membrane
- Q4. Define mitosis vs meiosis

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Unit II

10 Hours

- a) DNA and the Flow of Molecular Information
- b) DNA Functioning
- c) DNA and RNA
- d) Types of RNA
- e) Transcription and Translation

10 marks question

- Q1. Explain translation
- Q2. Explain transcription

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05 marks question

- Q1. Difference between DNA & RNA
- Q2. What are various type of RNA ?
- Q3. What are the various DNA functioning ?

2 marks question

- Q1. Define DNA
- Q2. Define RNA
- Q3. Difference between Transcription & Translation
- Q4. Types of RNA

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Unit III

10 Hours

- a) Proteins: Defined **and** Amino Acids
- b) Protein Structure
- c) Regularities in Protein Pathways
- d) Cellular Processes
- e) Positive Control and significance of Protein Synthesis

10 marks question

- Q1. Define or Explain positive control of significance of protein synthesis
- Q2. Write a note on protein structure

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05 marks question

- Q1. Explain protein structure
- Q2. What are the various significance of protein synthesis ?

2 marks question

- Q1. Define protein
- Q2. Define amino acid
- Q3. Explain protein structure
- Q4. Give examples of essential & non-essential amino acid

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Unit IV

08 Hours

- a) Science of Genetics
- b) Transgenics and Genomic Analysis
- c) Cell Cycle analysis
- d) Mitosis and Meiosis
- e) Cellular Activities and Checkpoints

10 marks question

- Q1. Differentiate between mitosis & meiosis
- Q2. Explain cell cycle

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05 marks question

- Q1. Give a note on transgenic & genomic analysis
- Q2. Give a note on cellular activities & check points

2 marks question

- Q1. Define cell cycle
- Q2. Define mitosis
- Q3. Explain meiosis
- Q4. What are transgenic ?

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Unit V

07 Hours

- a) Cell Signals: Introduction
- b) Receptors for Cell Signals
- c) Signaling Pathways: Overview
- d) Misregulation of Signaling Pathways
- e) Protein-Kinases: Functioning

10 marks question

- Q1. Explain mis-regulation of signalling pathways
- Q2. Explain receptors for cell signals

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05 marks question

- Q1. Explain protein kinases functioning
- Q2. Describe/ explain cell signalling
- Q3. Give overview of signalling pathway

2 marks question

- Q1. Define receptor
- Q2. Define cell signalling
- Q3. Protein kinase functioning
- Q4. Name various signalling pathways