

**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[BPHARM0422]**

**APRIL 2022  
(SEPTEMBER 2021 SESSION)**

**Sub. Code: 2084**

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)**

**PCI Regulation 2017 SEMESTER VIII**

**PAPER VIII – CELL AND MOLECULAR BIOLOGY**

***Q.P. Code: 562084***

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions.**

**(2 x 10 = 20)**

1. What is gene transfer? Discuss various methods for gene transfer in animal.
2. Define Receptor? Explain in detail about molecular pathway of GPCR.
3. Explain in detail about Protein synthesis in eukaryotes.

**II. Write notes on: Answer any SEVEN questions.**

**(7 x 5 = 35)**

1. Write in detail about structure and function of mitochondria.
2. Write short note on ribosomal RNA and micro RNA.
3. Explain in detail about replication DNA.
4. Write the functions of the following a. Centromere b. Cell wall.
5. JAK-STAT pathways.
6. Write a note on Kinase enzyme linked receptor.
7. Write short note on Autosomes and Sex chromosome.
8. Write the difference between eukaryotes and prokaryotes.
9. Give short note on different phases of cell cycle and Check points.

**III. Short answers on: Answer ALL questions.**

**(10 x 2 = 20)**

1. Monoclonal antibodies.
2. Meiosis.
3. Amino acid.
4. Types of cell signals.
5. Gel electrophoresis.
6. Tyrosine kinase receptor.
7. Telophase.
8. Cyclic AMP and GMP.
9. Plasmid.
10. Endoplasmic reticulum.

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**THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY**

**[B.PHARM 0323]**

**MARCH 2023  
(SEPTEMBER 2022 EXAM SESSION)**

**Sub. Code: 2084**

**B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)  
PCI Regulation 2017 - SEMESTER VIII  
PAPER V – CELL AND MOLECULAR BIOLOGY**

*Q.P. Code: 562084*

**Time: Three hours**

**Maximum: 75 Marks**

**I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)**

1. Write in detail about the cellular process of translation and transcription.
2. Write in detail about the technology and tools used for Genomic analysis.
3. Explain in detail about Signal transduction mechanism.

**II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)**

1. Write in detail about structure and function of DNA.
2. Write principles involved in Flow cytometry.
3. Explain in detail about the intra cellular signaling pathways.
4. Write the structure and functions of Cell wall.
5. Ras pathway cell signaling.
6. Write a note on Ion Channel Receptor.
7. Write short note on Nucleus.
8. Give short note on significance of protein synthesis.
9. Misregulation of signaling pathway.

**III. Short answers on: Answer ALL questions. (10 x 2 = 20)**

1. Recombinant DNA technology.
2. Metaphase.
3. Functions of Protein.
4. Types of RNA.
5. Phosphatidyl-inositol 3-phosphates (IP3).
6. Protein-kinase receptor.
7. Transgenic animals.
8. DNA Ligase.
9. Vector.
10. Mutation.

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