

Rajiv Gandhi University of Health Sciences

First Semester M. Pharm Degree Examination - 17-Jan-2020

[Time: 3 Hours]

[Max. Marks: 75]

Cellular and Molecular Pharmacology

Q.P. CODE: 5136

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three)

3 X 10 = 30 Marks

1. What are drug transporter and discuss the impact of genetic variations in drug transporters.
2. Explain the applications of metabolomics and genomics in pharmacogenomics.
3. Explain the GPCR signaling pathway and write their significance.
4. What is gene sequencing and genomic mapping? Explain the Maxam and Gilbert method of gene sequencing in detail.

SHORT ESSAY (Answer any Nine)

9 X 5 = 45 Marks

5. Explain the factors affecting the genetic variation in drug transporters.
6. Write a note on Restriction enzymes in recombinant DNA technology.
7. Explain intrinsic and extrinsic pathway of apoptosis.
8. Explain the media requirements and techniques of cell culture.
9. Discuss the basic principle and applications of calcium influx assays.
10. Write the importance of siRNA and micro RNA.
11. Discuss the principle and applications of cell viability assay.
12. Explain the role of cyclic AMP signaling pathway with example.
13. Explain the structure and functions of Microtubules and Microfilaments.
14. Explain the role of immunotherapeutics in clinical pharmacology.

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