

Rajiv Gandhi University of Health Sciences, Karnataka
First Semester M. Pharm Degree Examination - 23-Nov-2022

[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.

Answer All The Questions

10 X 7.5 = 75 Marks

1. Explain the phases of cell cycle and explain how G1/S cell cycle transition is regulated.
2. Explain the differences between
 - a) siRNA and miRNA
 - b) Necrosis and apoptosis
3. Explain Tyrosine kinase signaling pathway with suitable example.
4. Classify nuclear receptors with examples and explain activation pathway of any one.
5. Explain the principle, procedure and applications of DNA microarray technique.
6. What is gene therapy? Enumerate various methods used in gene therapy and explain the clinical applications of limitation.
7. Enumerate the different methods of gene cloning, explain the principle and procedure involved in-vitro gene cloning method.
8. Explain the types of immune therapeutics and their applications in clinical practice.
9. Explain the principles, applications of glucose uptake assay and calcium influx assay.
10. Mention different types of cell culture media and cell lines along with the maintenance of cell lines.

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