

Rajiv Gandhi University of Health Sciences, Karnataka
First Semester M. Pharm Degree Examination - 26-Jul-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. Discuss the various phases of cell cycle with neat diagram. Explain the roles of positive and negative regulators of cell cycle.
2. With suitable examples explain the signal transduction pathways which involves cAMP leading to (a) muscle contraction (b) smooth muscle relaxation (c) transcription of genes.
3. Describe the various types of gene transfer techniques. Explain the clinical applications and mention the recent advances in gene therapy.
4. What is polymorphism of receptors? Write a note on genetic variation in G-protein couple receptors and its effect.
5. With a neat diagram explain hydrodynamic focusing of cell. With relevant diagram explain the principles involved in different applications of flow cytometric in apoptosis assay.
6. What are biosimilars? Explain the opportunities and challenges of biosimilar in drug development?
7. Enlist five cell viability assays, explain in brief any one procedure. Describe the applications.
8. With a neat labelled diagram explain the fluid mosaic model of human cell.
9. Discuss the immunotherapeutic approaches to treat cancer.
10. Outline the steps and process involved in western blotting to identify the expression of a protein in a cell lysate. What is housekeeping gene give example?

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