

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**First Semester M. Pharm Degree Examination - 14-Dec-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.

**Answer All The Questions**

**10 X 7.5 = 75 Marks**

1. Write a note on cell cycle regulators.
2. Application of metabolomics and genomics in pharmacogenomics.
3. Write a note on polymorphisms affecting drug metabolism.
4. Explain the steps involved in gene expression.
5. Write a note on humanization antibody therapy.
6. What are biosimilars and its application?
7. What are the recent advances in gene therapy?
8. What are the basic equipments used in cell culture lab and their role and importance.
9. Differentiate between apoptosis and necrosis.
10. Write a note on calcium Ion and IP3 as a secondary messengers.

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