

**Rajiv Gandhi University of Health Sciences**  
**First Year M.Pharm Degree Examination – MAY 2016**

[Time: 3 Hours]

[Max. Marks: 100]

**MOLECULAR BIOLOGY**

**PAPER IV**

**(RS 2 & RS 3)**

**Q.P. CODE: 9244**

Your answers should be specific to the questions asked.  
Draw neat labeled diagrams wherever necessary. Answer all questions

**LONG ESSAY (Answer any TWO)**

**2 X 20 = 40 Marks**

1. Briefly explain the recombinant products in medicine with special reference to vaccines
2. Explain in detail about Polymerase Chain Reaction and Ligation Chain Reaction their applications
3. Write in detail about pharmacokinetics and pharmacodynamics of peptide and protein drugs

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Cellular aging and death
5. Elucidation of genetic code
6. DNA – based diagnosis of genetic diseases
7. Protein engineering
8. Enzymes used in molecular cloning
9. Monoclonal antibodies

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. Bio ethics
11. Third messenger

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