Rajiv Gandhi University of Health Sciences

First Year M. Pharm Degree Examination - NOV 2016

[Time: 3 Hours] [Max. Marks: 100]

Molecular Biology

(Revised Scheme 4)

Q.P. CODE: 9351

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

LONG ESSAY (Answer any TWO) **2 X 20 = 40 Marks**

1. Explain different phases of cell cycle. Write in detail the checkpoints and regulators of cell cycle.
2. Explain in detail the process of gene expression. Discuss the genetic elements that control gene expression.
3. Explain the structure and functions of plasma membrane and discuss various mechanisms of transport of small molecules and drugs across cell membrane.

SHORT ESSAY (Answer any FIVE) **5 X 10 = 50 Marks**

4. Explain properties and medical applications of induced pluripotent stem cells.
5. Explain the formation and applications of Restriction fragment length polymorphism.
6. Explain the principle and applications of Ligation Chain Reaction (LCR).
7. Explain principle, process and applications of antisense technology.
8. Write a note on biosensors.
9. Explain various isolation techniques for cloning vectors.

SHORT NOTES **2 X 5 = 10 Marks**

10. Human genome project
11. Catalytic antibodies as tools in molecular pharmacology

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