

Rajiv Gandhi University of Health Sciences
First Year M. Pharm Degree Examination – May 2013

[Time: 3 Hours]

[Max. Marks: 100]

PHARMACEUTICAL BIOTECHNOLOGY - I**(RS 2 & RS 3)****Q.P. CODE: 9312**

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

LONG ESSAY (Answer any FOUR)**4 X 25 = 100 Marks**

1. a) Give the advantages of microbial transformation over synthetic routes. 10 + 15
b) Explain the term microbial biotransformation. Discuss the biotransformation of terpenes.
2. What are microbiological assays? Write about culture characteristics, advantages and limitations of assay. List the different substances that can be tested. Write briefly about the diffusion, turbidimetry and end point assays. 25
3. a) Write the process technology of L-Dopa with a flow chart. 10 + 15
b) Describe the genetics of Streptomyces.
4. a) Describe the microbiological assay of Streptomycin. 12 + 13
b) Discuss about culture, media, production, extraction and purification of griseofulvin by fermentation with a flow chart.
5. a) Enumerate the microbial taxonomy. 10 + 10 + 5
b) Write the mechanism of antibiotic resistance and the role of plasmids.
c) Describe cell wall composition of typical bacteria.
6. Write short notes on 5 X 5 = 25
 - a) Degeneration of microbial cultures on repeated transfer.
 - b) Preservation of cultures by freeze drying.
 - c) Stock cultures.
 - d) Synchronous growth.
 - e) Selective isolation techniques.

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