Rajiv Gandhi University of Health Sciences

First Year M.Pharm Degree Examination – October 2010

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

BIOPROCESS TECHNOLOGY

(Revised Scheme 2)

Q.P. CODE : 9313

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) Explain types of reactions and Michaelis – Mention constant
    b) Explain the effect of temperature and pH on enzyme production

2. a) Describe in detail the design and operation of fermenters
    b) Write on scale up of fermentation process of any one antibiotics

3. a) What are mass transfer coefficients, explain the factors affecting them
    b) Explain the advantages and limitations of continuous fermentation systems

4. a) Describe the different chromatographic techniques employed in the purification of biological products
    b) Explain the significance of rheology in fermenter operation

5. a) Explain air sterilization methods in detail
    b) Write on thermal death of micro organisms

6. Write short notes on:
    a) Determination of bacterial growth rate
    b) Metabolic response assays
    c) Control of foam in fermentation process
    d) Effect of substrate concentration in enzyme production
    e) Solvent extraction

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