

**Registration No.**

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**M.E./M.Tech. Degree Examinations, January 2017**

**First Semester**

**BIOTECHNOLOGY**

**BY16004 – PHARMACEUTICAL BIOTECHNOLOGY**

**(Regulation 2016)**

**QP Code: 834481**

**Time: Three hours**

**Maximum : 100 marks**

Answer **ALL** questions

**PART A - (10 X 2 = 20 Marks)**

1. Define the term generic and its importance in drug industry.
2. What are biosimilar drugs? In what way it differ from generic drug?
3. Explain bioequivalence.
4. Reason out the need for different dosage forms.
5. What is post translation modification?
6. Diagram the kinetic effect of traditional drug dosing and controlled delivery dosing.
7. Differentiate agonists and antagonists.
8. Is it possible to treat common cold with antibiotics? Justify your answer.
9. Write down the importance of tissue plasminogen activator.
10. List out the uses of therapeutic monoclonal antibodies.

**PART B - (5 X16 = 80 Marks)**

11. (a) List out the objectives of drugs and cosmetics Act. Comment on the role and regulatory aspects of drugs and cosmetics ACT. **(16)**

**(OR)**

- (b) Expand INN and explain in detail the framework for designating the proper name of biological product through this system of nomenclature. **(16)**
12. (a) Draw a flow chart to show the classification of dosage forms and describe the process for making semi-solid from of drug with example. **(16)**

**(OR)**

- (b) Comment on the relationship between pharmacokinetics and pharmacodynamics and the factors affecting ADME process. (16)
13. (a) Compare and contrast transdermal and liposome mediated drug delivery with its mechanism of action, advantages and disadvantages. (16)
- (OR)**
- (b) Delineate the steps involved in the production of glycosylated and non-glycosylated proteins and elucidate the problems encountered during its characterization. (16)
14. (a) Classify laxatives and illustrate the pharmacodynamics study of laxatives with an example. (16)
- (OR)**
- (b) Write an essay on the mechanism of action of inhibition of antibiotics against pathogens to prevent its proliferation inside the host cell. (16)
15. (a) Illustrate with a neat sketch the recombinant method of production of Factor VIII and Factor IX and its importance in drug industry. (16)
- (OR)**
- (b) Write short notes on recombinant insulin and monoclonal antibodies. (16)