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GIET UNIVERSITY, GUNUPUR – 765022
M. Tech (Third Semester – Regular) Examinations, December – 2020
MPEBT 3012 – Pharmaceutical Biotechnology
(Biotechnology)

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.

PART – A (2 x 10 = 20 Marks)

Q.1. Answer ALL questions

- a. Determine the role of half life in the drug development.
- b. If 3 g of a drug are added and distributed throughout a tank and the resulting concentration is 0.15 g/L, calculate the volume of the tank.
- c. Explain how GMP helps boost pharmaceutical export opportunities.
- d. If one side of the 90% confidence interval of a pharmacokinetic variable for testing bioequivalence lies on 0.80 or 1.25, can we conclude that the products are bioequivalent?
- e. An infant, 15 months old and weighing 20 pounds, needs Streptomycin Sulfate, which is usually administered to adults as 1 gm (1000 mg), as a daily IM injection. What is the appropriate dosage for the infant as per Fried's rule?
- f. Infer the role of biotechnology in drug discovery.
- g. What are the different types of tablet coating?
- h. Differentiate between polyclonal and Monoclonal Antibodies
- i. Describe the role of recombinant form of hGH called somatropin in growth hormone deficiency disease
- j. The type of clotting factor that is missing determines what kind of hemophilia you have. The two most common types are hemophilia A and hemophilia B. Name the clotting factor missing in hemophilia A and hemophilia B

PART – B (6 x 5 = 30 Marks)

Answer ANY FIVE questions

Marks

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| 2. Enumerate the role of regulatory affairs in pharma industry | (6) |
| 3. Explain the theoretical aspects of formulation including adjuvant like stabilizers, colorants, flavours with examples in monophasic liquid dosage forms. | (6) |
| 4. Elucidate in detail the Liposomes as a Novel Drug Delivery System | (6) |
| 5. The vaccine information sheet for my child's recent vaccination listed lots of potential side effects. Why is vaccination recommended if it can cause all of these side effects? | (6) |
| 6. Describe in detail the step wise approach to assessing immune genicity of biopharmaceuticals. | (6) |
| 7. Examine the five critical steps in the drug development process | (6) |
| 8. Decipher the working principle of tissue plasminogen activator. | (6) |
| 9. Describe the different types of tablets and mention the General Properties of Tablets | (6) |

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