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Question Paper Code: UD104

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Biotechnology

21BTV104 - BIOPHARMACEUTICAL TECHNOLOGY

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

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| 1. Define CADD | CO1- U |
| 2. What do you mean by Pharmacoeconomics? | CO1- U |
| 3. What is the process involved in Drug manufacturing? | CO1- U |
| 4. Difference between competitive and non-competitive inhibition | CO2- App |
| 5. What are the preparation methods of effervescent granules? | CO1- U |
| 6. Differentiate Monophasic and Biphasic liquid dosage forms | CO2- App |
| 7. What is meant by transfection? | CO1- U |
| 8. Define API | CO1- U |
| 9. List out the common side effects in Streptomycin | CO1- U |
| 10. Classify the sources of Antibiotics | CO1- U |

PART – B (5 x 16= 80 Marks)

11. (a) Discuss in detail about the Drug discovery and its developmental stages CO1 - U (16)
- Or
- (b) Demonstrate the types of Therapeutic enzyme and its applications CO1 - U (16)
12. (a) Selective Serotonin Reuptake Inhibitors (SSRIs) inhibit the reuptake of serotonin in the brain, which allows the levels of the neurotransmitter to increase. Sometimes the mechanism of action of a drug is known—other times, it's not fully understood, therefore discuss about the various drug mechanisms in detail CO2 - App (16)

Or

- (b) Drugs can have many different kinds of effects on the human body. Determine how much you know about areas like a basic definition of pharmacodynamics and drugs that bind to receptors to mimic substances that body makes naturally. CO2 - App (16)
13. (a) Explain in detail about the oral dosage form and its types CO1 - U (16)
Or
- (b) Explain in detail about the preservation and packaging technique involved in production of pharmaceutical products CO1 - U (16)
14. (a) Elaborate how liposomes are capable for entrapment of both hydrophilic and lipophilic drugs. Give its advantages CO1 - U (16)
Or
- (b) Detail a case study to stimulate discussion around how the core principles contained could be applied to product realisation programs for a biotechnology-derived monoclonal antibody CO1 - U (16)
15. (a) Classify penicillin. Explain in detail pharmacology of penicillin CO1 - U (16)
Or
- (b) What are monoclonal antibodies? Classify them by giving relevant examples CO1 - U (16)