

Reg. No.

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B. E / B. TECH.DEGREE EXAMINATIONS, MAY 2023
 Seventh Semester
CH18016- DRUG AND PHARMACEUTICAL TECHNOLOGY
(Chemical Engineering)
(Regulation 2018)

TIME:3 HOURS

MAX.MARKS: 100

- CO1** Explain the organic therapeutic agents uses and economics.
CO2 Interpret the drug metabolism and pharmaco kinetics & microbiological and animal products.
CO3 Apply the process on alkylation, condensation and complex chemical conversions.
CO4 Identify the manufacturing principles and packing on active pharmaceutical ingredients.
CO5 Select the appropriate method of analysis and test for drugs.

PART- A (10x2=20Marks)
 (Answer all Questions)

	CO	RBT LEVEL
1 Mention the adverse effects of penicillin.	1	2
2 List the various effects involved in drug action.	1	2
3 Define partition coefficient. List the factors affecting partition coefficient.	2	2
4 Compare membrane receptors and Nuclear receptors involved in mechanism of drugs.	2	2
5 How is carbocation rearrangement a limitation of Friedel-Crafts Alkylation reactions? Justify.	3	2
6 Illustrate the importance of Electrophilic Substitution reaction with suitable example.	3	2
7 List the common defects associated with coating tablets.	4	2
8 Give the significance of maintaining GMP in pharmaceutical industries. Justify your answer.	4	2
9 Name the vitamin responsible for the conversion of active hormone.	5	2
10 Differentiate ANALGESICS from ANAESTHETICS.	5	2

PART- B (5x 14=70Marks)
 (Restrict to a maximum of TWO subdivisions)

	Marks	CO	RBT LEVEL
11(a) Define the following: 1. Drug Design strategies 2.Sources of Drugs	(14)	1	3
(OR)			
11(b) Clinical study is important in drug development, justify the statement. Discuss in detail the various types of clinical trials.	(14)	1	3

- 12(a)** Analyze the various physicochemical properties involved in drug development. (14) 2 4
- (OR)**
- 12(b)** Compare any two mechanisms of antimicrobial action in human bodies with suitable reactions and diagrams. (14) 2 4
- 13(a)** Present the mechanisms of the following electrophilic substitution reactions:
Halogenation, Alkylation and Acylation with suitable examples. (14) 3 3
- (OR)**
- 13(b)** Elucidate the various schemes of reactions Aryl halides undergo with suitable examples. (14) 3 3
- 14(a)** Distinguish in detail the various steps involved in manufacturing compressed tablets. (14) 4 4
- (OR)**
- 14(b)** Evaluate the various factors to be considered for maintaining good practices for quality control laboratories. (14) 4 4
- 15(a)** Explain the actions of various antiseptic and disinfectants in human body. (14) 5 4
- (OR)**
- 15(b)** Explain the application of spectrophotometry in practice with suitable examples and also explain the usage of buffers and their influence of pH on ionization. (14) 5 4

PART- C (1x 10=10Marks)

(Q.No.16 is compulsory)

- | | Marks | CO | RBT LEVEL |
|---|-------------|----------|-----------|
| 16 Briefly explain the sources, functions and other characteristics of any two vitamins. | (10) | 5 | 6 |
