

Total No. of printed pages = 3

PY 132705

Roll No. of candidate

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2023

B.Pharm. 7th Semester (Old) End-Term (Repeater) Examination

PHARMACEUTICAL CHEMISTRY – VII (MED. CHEM-III)

Full Marks – 100

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer question no. 1 and any *six* from the followings

1. Multiple Choice Questions (10 × 1 = 10)
- (i) Which of the following will be a pharmaceutical application of prodrugs?
- (a) Enhancement of bioavailability
 - (b) Reduction of toxicity
 - (c) Improvement of odour
 - (d) Site-specific drug delivery?
- (ii) Why carbenicillin cannot be given orally?
- (a) Tastes bad
 - (b) Bad odour
 - (c) Degraded by saliva
 - (d) Hydrolysed easily.
- (iii) How to prevent hepatic first-pass metabolism for corticosteroids?
- (a) Providing intravenously
 - (b) Providing orally
 - (c) Form esters and ether products
 - (d) By enhancing lipophilicity

[Turn over

- (iv) Which is the earliest discovered prodrug?
- (a) Prontosil
 - (b) Sulphanilamide
 - (c) Aspirin
 - (d) Salicylic acid
- (v) Following are the Phase I reactions except _____
- (a) Oxidative reactions
 - (b) Hydrolytic reactions
 - (c) Reductive reactions
 - (d) Sulphide reactions
- (vi) Which of the following does not affect the activity of penicillin?
- (a) bile
 - (b) hydrochloric acid
 - (c) cysteine
 - (d) sodium hydroxide
- (vii) Antibiotic produced by *Streptomyces rimosus* is
- (a) chlortetracycline
 - (b) oxytetracycline
 - (c) tetracycline
 - (d) doxycycline
- (viii) Acycloguanosine is a nucleoside analogue which is active against _____
- (a) Influenza A virus
 - (b) HIV virus
 - (c) Herpes virus
 - (d) Influenza B virus
- (ix) Which antineoplastic drug is a folic acid analogue?
- (a) Methotrexate
 - (b) Mercaptopurine
 - (c) Cytarabine
 - (d) Fluorouracil

- (x) Peptide bond is _____
- (a) Covalent bond
 - (b) Ionic bond
 - (c) Metallic bond
 - (d) Hydrogen bond
2. (a) What are pro drugs? How are they different from other medications? (2+3=5)
- (b) Why are prodrug used and how do they work? Explain it with suitable example. (5 + 5 = 10)
3. (a) Explain the term Drug metabolism. (2)
- (b) Describe Phase-I and Phase-II drug metabolism elaborately. (6+7=13)
4. (a) Classify antineoplastic drugs with one example each. (6)
- (b) Describe the synthesis of the following drugs : (3 × 3 = 9)
- (i) Chlorambucil
 - (ii) Methotrexate
 - (iii) Thiotepea
5. (a) Explain the structure activity relationship of Tetracyclines. (10)
- (b) Describe the synthesis and uses of Dapsone and Isoniazid. (2.5+2.5=5)
6. (a) Describe immunosuppressive and immunostimulants citing example. (10)
- (b) Explain Anthelmintics with mode of action and uses. (5)
7. (a) Classify penicillin with proper example and structure. (10)
- (b) Describe the synthesis of Ciprofloxacin and Nalidixic acid. (2.5+2.5=5)
8. (a) Explain Antiseptic and disinfection with proper example. (5+5=10)
- (b) Explain the synthesis of two antifungal drugs. (2+5+2.5 = 5)
9. (a) Explain thyroid and antithyroid drugs citing example. (6)
- (b) Write down the synthesis of Amantadine, Acyclovir and Zidovudine. (3+3+3=9)