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PY 132705

Roll No. of candidate | | | | | | | | | | |

2019

B.Pharm. 7th Semester End-Term Examination

PHARMACEUTICAL CHEMISTRY – VII
(MED. CHEM –III)

Full Marks – 100 Time – Three hours

The figures at the end margin indicates full marks for the questions.

Answer question No. 1 and any *six* from the rest.

1. Answer the following questions : (10 × 1 = 10)

(i) In Phase I metabolic reactions, the hydroxylation of compounds with two aromatic rings preferentially occurs in

(a) Less electron rich ring

(b) Chiral carbon attached to the ring

(c) More electron rich ring

(d) None of the above

(ii) The penicillin have a carboxylic acid group placed at

(a) C–2

(b) C–3

(c) C–6

(d) C–7

(iii) Inhibitor of steroll4 α-demethylase is

(a) Naftifine

(b) 5-FluocytoSine

(c) Ciclopirox

(d) Ketocanazole

(iv) The activated co enzymes in the formation of β – glucuronides is

(a) Uridine 6'diphospho-α-D glucoronic acid

(b) Adenosine 5'diphospho-α-D glucoronic acid

(c) Uridine 5' diphospho-α-D glucoronic acid

(d) Guanine 6' diphospho-α-D glucoronic acid

(v) Nonsteroidal antiandrogen useful as cancer agent is

(a) Flutamide

(b) Tamoxifen

(c) Etoposide

(d) Etoposide

(vi) The antidiabetic drug also effective in lowering the cholesterol level is

(a) Phenformin

(b) Repaglinide

(c) Chlorpropamide

(d) Rosiglitazone

(vii) The terminal nitrogen in sulphonyl ureas should be substituted with

(a) Atleast 2 carbon chain

(b) Atleast 3 carbon chain

(c) Atleast 12 carbon chain

(d) Atleast 1 aryl unit

(viii) Fluoroquinolones are indicated for all of the following expect

(a) Urinary tract infection

(b) Bronchial Asthama

(c) Bone infection

(d) Tuberculosis

(ix) The starting compound for the synthesis of Niclosamide is

(a) 1 formylthiophen

(b) 2 acetylthiophen

(c) 2 formyl furan

(d) None of the above

(x) The antifungal with bis-triazole nucleus is

(a) Ketoconazole

(b) Butaconazole

(c) Fluconazole

(d) Ciotrimazole

Answer any six questions

2. Explain the catalytic reaction cycle involving cytochrome P-450 in the oxidation of xenobiotics. Write about NIH shift of Arene oxide. Write about ω oxidation and $\omega-1$ oxidation Give examples. Write about glucuronic acid conjugation of phase II reactions. (5+3+3+4=15)

3. Define prodrugs. Differentiate between hard drug and soft drug. Explain the — metabolism of Sulindac and estramustine. Write the SAR of Fluoroquinolone antibiotic. (2+3+5+5=15)

4. Discuss the MOA of β b-lactam antibiotic with reference to the biosynthesis of peptidoglycan. Write about the degradation of penicillin. Give the synthesis and IUPAC names for Ampicillin and cephalexin. (5+5+5 =15)

5. Write the synthesis and IUPAC names for

   (a) Zidovudine

   (b) Thiotepa

   (c) Acyclovir

   (d) Nalidixic acid (4+4+4+3=15)

6. Discuss the classification, MOA and SAR of sulphonamide drugs. Give synthesis of any two drugs from the classification. Write short note on sulphones. (7+5+3=15)

7. Classify Antimalarial drugs. Explain the mechanism of action with reference to the life cycle of malaria. Write the synthesis of any two anti malarial drug. (4+4+7=15)

8. Write short notes on

   (a) Oral hypoglycaemic agents

   (b) Antithyroid drugs

   (c) Immunosuppressive and immunostimulants. (5+5+5=15)

9. Classify various Anti-neoplastic drugs, with their mechanism of action, write the synthesis of Busulpan and 5-fluro uracil. Why the multi drug therapy is needed in cancer treatment? (3+3+7+2)