

Subject: Medicinal Chemistry-III (Old)

Answer any five questions taking at least TWO from each group. ALL parts of a question must be answered in the same place of the answer-script.

Time : Three hours

Group-A

Full Marks : 100

1. a) Classify cephalosporins based on generation. Give atleast one example with structure.
b) Outline the mode of action and SAR of tetracycline.
c) Draw a scheme for degradation of penicillins. 6+8+6=20

2. Outline the synthesis of the following (any five):

- i) Benzylpenicillin ii) Ampicillin iii) Methicillin iv) Cephalothin v) Cephaloridine
vi) Cefotaxime 5×4=20

3. a) Write a short note on macrolides. 10
b) Discuss the mode of action, SAR, synthesis and therapeutic uses of chloramphenicol. 10

Group-B

4. a) Classify antimalarials based on their chemical classes. Discuss synthesis of:
i) Amodiaquine ii) Pyrimethamine iii) Proguanil. 4+8+4+4=20
5. Discuss in detail mode of action of antibacterial sulfonamides. Give synthesis of:
i) Sulfathiazole ii) Sulfadiazine iii) Sulfacetamide. 8+(3×4)=20
6. Outline the synthesis of i) INH ii) PAS iii) Dapsone. Write a note on longer acting dapsone derivatives. (3×4)+8=20