B.Pharm- 4th year, 1st sem, 2019 Ref. No. Ex/Pharm/T/412/2019

Subject: Medicinal Chemistry-III

Answer any ***five*** questions,taking atleast ***one*** from each group. ALL parts of a question must be answered in the same place of the answer-script.

Time : Three hours Full Marks : 100

Group-A

1. a) Define and classify antibiotics with examples.

   b) Discuss the mode of action and SAR of penicillin.

   c) Outline the degradation of cephalosporin in different chemical environment. 4+10+6=20

2. 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

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

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

4. a) Write a short note on macrolides. 10

   b) Discuss the mode of action, SAR, synthesis and therapeutic uses of chloramphenicol. 10

Group-B

5. a) Classify antimalarials based on their chemicals classes. Discuss synthesis of:

i) Amodiaquine ii) Pyrimethmine iii) Proguanil. 4+8+4+4=20

6. Discuss in detail mode of action of antibacterial sulfonamides. Give synthesis of:
i) Sulfathiazole ii) Sulfadiazine iii) Sulfacetamide. 8+(3×4)=20

7. Outline the synthesis of i) INH ii) PAS iii) Dapsone. Write a note on longer acting dapsone derivatives. (3×4)+8=20

Name of Examinations: B.PHARMACY FOURTH YEAR FIRST SEMESTER- 2019
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GROUP - C

Answer any five questions taking at least one from each Group

Q8.a) Explain the S.A.R. of thyromimetic and anti thyroid drugs. 5

b) Outline the synthesis of MTU and Carbimazole for hyper thyroidism. 5+5

c)Discuss the stepwise biosynthetic conversion of T-4 to T-3 5

Q9.a) Outline the biosynthetic pathway of Insulin formation. 5

b) What is the M.O.A. of Insulin? Explain different types of Insulin preparations with examples. 5

c) What is the basic structure with linkages of Insulin? 5

d)How human Insulin is prepared? How human Insulin differs from other sources of Insulin? 3+2

Q10.a) Explain M.O.A of thiazolidinedione drugs used for diabetes. 5

b) Explain the S.A.R. of sulfonyl urea drugs. 5

c) Why Acarbose is to be taken during principal meals? 5

d) Why biguanides are known as anti hyperglycemics and not hypoglycemic 5