April 2025
B.A./B.Sc.
Fourth Semester
SKILL ENHANCEMENT COURSE – 2
CHEMISTRY
Course Code: CHS 4.11
(Pharmaceutical Chemistry)

Total Mark: 35 *Pass Mark: 14*
Time: 2 hours

Answer two *questions, taking* one *from each unit.*

UNIT–I

1. (a) Define drug discovery. What are the main phases involved in modern drug discovery? 1+5=6
   (b) What are antibiotics? Explain the synthesis of chloramphenicol? 2+3½=5½
   (c) Write a note on the following: 3×2=6
   (i) Sulphacetamide
   (ii) Aspirin

2. (a) What is drug? Explain the drug discovery with the phase involved in drug discovery? 2+4½=6½
   (b) What are antipyretic agents? Give the synthesis, uses and properties of paracetamol? 1+4=5
   (c) Briefly discuss the following: 2×3=6
   (i) Sulphonamides
   (ii) Drug design and development
   (iii) Antibacterial agent

UNIT–II

3. (a) Write short notes on the following: 2×3=6
   (i) Vitamin B_{12}
   (ii) Vitamin C
   (iii) Chloromycetin

(b) Discuss penicillin giving its deficiency and uses. Briefly elucidate the side effects of penicillin. 3+2½=5½

(c) Discuss the classification and application of CNS agents. 6

4. (a) Explain the fermentation process for preparation of ethyl alcohol. What are its applications in pharmaceutical chemistry? 4+2=6

(b) Describe the mechanism of action of application of dapsone as an anti-leprosy drug. What are its advantages and potential side effects? 4+2=6

(c) Briefly explain the antibiotic classification of cephalosporin and its clinical application. 5½