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(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2020 ONLY)

20 PCY 4E7

REG.NO. :

**N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI**

**END-OF-SEMESTER EXAMINATIONS : JULY 2022**

**M.Sc.-CHEMISTRY** **MAXIMUM MARKS: 70**

**IV SEMESTER** **TIME : 3 HOURS**

## MEDICINAL CHEMISTRY

**SECTION - A** **(10 X 1 = 10 MARKS)**

**ANSWER THE FOLLOWING QUESTIONS.**

**MULTIPLE CHOICE QUESTIONS.** **(K1)**

1. Sulpha drugs are used as_____.

a) Antimalarial b) Analgesic c) Antibacterial d) Antipyretics

2. Tetracycline is used as a_____.

a) Antibiotic b) Antimalarial c) Antileprotic d) Antitubercular

3. The main constituent of the drug crocin (used as a antipyretic and analgesic) is_____.

a) Phenacetin b) Acetyl salicyclic acid

c) Phenylbutazone d) Paracetamol

4. Atenolol is used as a drug in the treatment of_____.

a) Leprosis b) Hypertension c) Tuberculosis d) Malaria

5. The heterocylic unit present in histamine is_____.

a) Imidazole b) Pyridine c) Furan d) Pyrrrole

**ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES** **(K2)**

6. Give an example for a natural drug which acts as a pain killer.

7. Which part of the structure is responsible for pencillin activity?

8. Which drug is used to lower body temperature?

9. What is meant by a cardiovascular drug?

10. What are antihistamines? Give example.

**(CONTD...2)**

**SECTION – B (5 X 4 = 20 MARKS)**

**ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)**

11. a) List the physicochemical properties which influence the biological activity of a drug and what is the importance of knowing the physicochemical properties of a drug for treatment?

(**OR)**

b) Examine the pathways of drug metabolism and find out the reactions taking place in each pathway.

12. a) Describe the structure of commonly used Tetracyclines and write the uses.

(**OR)**

b) Assess the stereochemical aspects of chloramphenicol and identify which isomer is active.

13. a) Examine the use of narcotics as analgesics with suitable examples and highlight their side effects.

(**OR)**

b) Sketch the steps involved in the synthesis of paracetamol.

14. a) List any four commercially available antitubercular agents and comment on their structures.

(**OR)**

b) Classify cardiovascular drugs with suitable examples.

15. a) Discuss the Structure activity Relationship in antihistamines.

(**OR)**

b) Describe the synthesis of a histamine cetirizine.

**SECTION - C (4 X 10 = 40 MARKS)**

**ANSWER ANY FOUR OUT OF SIX QUESTIONS**

**(16$^{th}$ QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS**

**(FROM Qn. No : 17 to 21) (K4 (Or) K5)**

16. Explain the general scheme of synthesising N-substituted sulphonamides and what are their uses?

17. Discuss the mechanism of action of sulphonamide drugs and write note on side effect of sulpha drugs.

18. Classify penicillin’s based on the chemical structure and explain their mode of action

19. Point out the advantages and disadvantages in using aspirin as an antipyretic and analgesic.

How is it synthesised?

20. Outline the mode of action of cardiovascular drugs in controlling the blood pressure

21. Describe the mode of action of antihistamines using suitable example.

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