

M.Sc. Semester-3 Examination

504

Chemistry (O)

March-2024

Time : 2-30 Hours]

[Max. Marks : 70

- Instructions:** (1) All questions are compulsory.
(2) Figures to right indicate full marks.

Question – 1. Write the following.

- (i) Why new drug development is essential ? Discuss it. 7-MARKS
(ii) Write a note on “Quantitative structure activity relationship”. 7-MARKS

OR

- (i) Discuss Structural variations among tetracycline and penicillin. 7-MARKS
(ii) What is Hard drug and soft drug ? Write a note on importance of physio chemical parameters like lipophilicity and partition coefficient for API (Drug). 7-MARKS

Question – 2. Write the following.

- (i) Give synthesis and uses of: Isoniazid (INH) and Ethambutol. 7-MARKS
(ii) Give synthesis and uses of: Daraprim and Chloroquine. 7-MARKS

OR

- (i) Give synthesis and uses of: Atenolol and Methyl dopa. 7-MARKS
(ii) Give synthesis and uses of: Alprazolam and Ibuprofen. 7-MARKS

Question – 3. Write the following.

- (i) Discuss the difference between batch versus continuous operation. 7-MARKS
(ii) Discuss sulphonation of Naphthalene, α -Naphthol and β -Naphthol at various concentration of H_2SO_4 and temperature. 7-MARKS

OR

- (i) Discuss the importance of GLP and GMP in industry. 7-MARKS
(ii) Write a note on green catalysts and solvents with suitable examples. 7-MARKS

Question – 4. Write the following.

- (i) Discuss various types of filtration in brief. 7-MARKS
(ii) What is TLC ? Explain TLC with mobile phase and Stationary phase. 7-MARKS

OR

- (i) Write a note on extraction. 7-MARKS
(ii) Write a note on GC and Column Chromatography. 7-MARKS

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Question – 5. Attempt any seven out of twelve.

14-MARKS

1. Define: docking.
 2. Define: pro-drug.
 3. What is Antimalarial agents ?
 4. Give structure and use of DDS (Dapsone).
 5. Define: Cardiovascular drugs.
 6. What are Psychoactive drugs ?
 7. What is patents?
 8. What is Oleum?
 9. Define: one pot reaction.
 10. What can be separated by fractional distillation ?
 11. What is SFC used for ?
 12. What is the main principle of HPLC ?
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