

Time : 2-30 Hours

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| Que. 1 | A Discuss phase I, II and III clinical trials.   | 7 marks  |
|        | B Discuss in brief about SAR and MOA.  | 7 marks  |
|        | OR   |          |
|        | A Discuss the SAR of 4-amino quinoline anti-malarial agents.   | 7 marks  |
|        | B Write synthesis of 4-Chloro quinoline and chloramphenicol.   | 7 marks  |
| Que. 2 | A Give synthesis of Thiopental, chlorozepan, and alprazolam.   | 7 marks  |
|        | B Give synthesis of methyl dopa, tolbutamide, and acetazolamide.                                     | 7 marks  |
|        | OR   |          |
|        | A Give synthesis of INH, DDS and Ethambutol.   | 7 marks  |
|        | B Give synthesis of lidocaine, Ibuprofen, and pethidine.   | 7 marks  |
| Que. 3 | A Write brief not on GLP and GMP.  | 7 marks  |
|        | B Write a note on the Patent and its importance in Research and development/chemical industry.       | 7 marks  |
|        | OR   |          |
|        | A What is MSDS and how it important in industry?   | 7 marks  |
|        | B Write a note on various types of chlorinating agents used for chlorination with suitable examples. | 7 marks  |
| Que. 4 | A Write a note on HPLC.  | 7 marks  |
|        | B Write a note on Column and Paper Chromatography.   | 7 marks  |
|        | OR   |          |
|        | A Write a note on various filtration methods.  | 7 marks  |
|        | B Write a note on extraction.  | 7 marks  |
| Que. 5 | Answer any <del>seven</del> <sup>seven</sup> questions (2 marks each)                                | 14 marks |
|        | (i) When do we use GC and LC?  |          |
|        | (ii) By using which filter media, we can remove the bad odor from water?                             |          |
|        | (iii) Define CADD.   |          |
|        | (iv) What is distillation?   |          |
|        | (v) What is ADMET?   |          |
|        | (vi) Discuss in brief drug-receptor interactions.  |          |
|        | (vii) Why reaction is faster in MW than in conventional heating?                                     |          |
|        | (viii) What is MCR? Why it is better than the multi-steps reactions?                                 |          |
|        | (ix) Write/Draw the structures of Penicillin-G and Chlorotetracycline.                               |          |
|        | (x) Define diuretic and hypoglycemic drugs.  |          |
|        | (xii) What are Psychoactive drugs?   |          |
|        | (Xiii) What are QSAR and 3D-QSAR?  |          |
|        | (xiv) What are SAR and MOA?  |          |