

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2019

(CUCSS—PG)

Chemistry

CH 4E 04—PETROCHEMICALS AND COSMETICS

(2015 Admissions)

Time : Three Hours

Maximum : 36 Weightage

Section A*Answer all questions.**Each question carries 1 weightage.*

1. What are the main constituents of crude petroleum ?
2. Describe the raw materials from which hydrocarbons are obtained in petrochemical industry.
3. Write an industrial method for methanol production.
4. What is absolute spirit ? Describe its manufacture.
5. Which are constituents in petroleum that has sulfur ?
6. How can petroleum be desalted ?
7. What are fuel and boiler oils ?
8. What are lacquers ? How are these obtained ?
9. Describe adsorptive purification of petroleum.
10. What is demercaptinisation ?
11. What are the constituents of toothpaste ?
12. What are colognes ?

(12 × 1 = 12 weightage)

Section B*Answer any eight questions.**Each question carries 2 weightage.*

13. Explain Octane and Cetane numbers. How are these determined ?
14. Briefly explain the nature and uses of saturated and unsaturated hydrocarbons from petroleum industry.

Turn over

15. Explain the process for manufacturing acetaldehyde and formaldehyde.
16. Discuss the manufacture of acetic acid, isopropanol, glycerine and acetone industrially.
17. Write a note on ASTM distillation curve.
18. Which are the major methods of petroleum distillation?
19. Discuss the manufacture of products from petroleum used in lubrication.
20. Describe how fuel for gas turbines, jet engine fuel, paraffins, thinners and solvents are obtained from petroleum.
21. Explain hydrorefining.
22. Describe the newer methods of petroleum purification.
23. Write an account of the perfumes. Write examples.
24. Describe the constituents of hair dye, tooth paste, lipstick and after shave lotions.

(8 × 2 = 16 weightage)

Section C

Answer any two questions.

Each question carries 4 weightage.

25. Write an account of cracking of petroleum.
26. Write a note on chemical processing of paraffins, ethylenes, acetylenes and aromatics in petrochemical industry.
27. Discuss the methods by which physical properties of petroleum are determined.
28. Write an account of industrial petroleum processing equipments.

(2 × 4 = 8 weightage)