

P P SAVANI UNIVERSITY

Seven Semester of B. Tech. Examination

December 2021

SECH4030 Petroleum Studies

11.12.2021, Saturday

Time: 09:00 a.m. To 11:30 a.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

- Q - 1 Define/Explain the following terms : (i) Smoke point (ii) flash point (iii) Pour point (iv) Aniline point (v) fire point [05]
- Q - 2 (a) Discuss the Furfural Extraction and Dewaxing technique for lube oil. [05]
- Q - 2 (b) Explain how crude quality affects the topology of refinery configuration? [05]
- OR
- Q - 2 (a) Describe different arrangement of distillation towers in Petroleum fractioning with the help of neat sketches. [05]
- Q - 2 (b) With a neat sketch of True Boiling Point apparatus, explain the test method and significance. [05]
- Q - 3 (a) Give classification of crude oil [05]
- Q - 3 (b) Explain the Catalytic Reforming process in detail. [05]
- OR
- Q - 3 (a) What is cracking? Discuss the properties of cracked materials. [05]
- Q - 3 (b) Write short notes on Dehydration and desalting of crudes. [05]
- Q - 4 Discuss about different test and properties of petroleum oil. [05]

SECTION - II

- Q - 1 Enlist major petrochemical units in India [05]
- Q - 2 (a) Discuss properties and uses of Methanol. [05]
- Q - 2 (b) Discuss properties and uses of Acetic acid. [05]
- OR
- Q - 2 (a) Discuss major engineering problems in vinyl chloride manufacture. [05]
- Q - 2 (b) Describe with a neat flow diagram manufacture of Ethylene Oxide. [05]
- Q - 3 (a) Write explanatory note on visbreaking. [05]
- Q - 3 (b) Discuss various types of naphtha and their important properties & applications. [05]
- OR
- Q - 3 (a) Describe manufacturing process of styrene butadiene rubber with neat flow diagram and discuss major engineering problems associated with it. [05]
- Q - 3 (b) Write uses and major properties of High Density Polyethylene and Low Density Polyethylene [05]
- Q - 4 Discuss about the current scenario of world Petrochemical industry [05]
