

DEPARTMENT OF SCIENCES, IV SEMESTER M.Sc. (Chemistry)
END SEMESTER EXAMINATIONS, APRIL 2023
 Chemistry of Petrochemicals [CHM 6004]
(CHOICE BASED CREDIT SYSTEM - 2021)

Time: 3 Hours

Date: 28 Apr 2023

MAX. MARKS: 50

Note (i) Answer ALL questions

(ii) Draw diagrams, and write chemical structures or flowchart wherever necessary

Q No	Question	Marks	CO	BL
1A	Describe the distribution of crude oil reserves. Explain chemical composition of the crude oil.	4	1	1
1B	Discuss the various types of petroleum distillation process giving their advantages.	4	1	2
1C	Explain the differences between sweet and sour crude.	2	1	2
2A	Explain the process of catalytic cracking using moving bed reactors. How is catalyst regenerated in the process?	4	1	2
2B	What is synthetic petrol? Write various feed stocks used to manufacture synthetic petrol.	4	1	2
2C	Explain hydrocracking reaction using an example.	2	2	3
3A	Describe the manufacturing process of ethyl chloride and ethanol from ethylene.	4	2	3
3B	How is vinyl chloride produced from acetylene? Write its applications.	4	2	2
3C	Write applications of linear alkyl benzene sulphonates.	2	2	1
4A	Give an overview of synthesis and applications of zeolite catalysts petrochemical industries.	4	3	2
4B	Discuss the applications of modified zeolites in chemical synthesis.	4	3	3
4C	Why is zeolite more selective than conventional catalysts?	2	3	3
5A	Describe the manufacturing process of chloroprene from acetylene and write its applications.	4	2	2
5B	Describe the following properties of lubricants. i) Saponification number ii) Aniline point iii) Viscosity index iv) Flash point	4	4	1
5C	What is pour point of a lubricant? How is it determined?	2	4	1
