1. Processing of Crude Oil

(2023)

Syllabus:

Brief description of origin of petroleum, migration, reservoir, exploration & drilling of crude petroleum, various unit process involved petroleum process like surface operation, fractional distillation, refining, cracking, reforming, isomerization, polymerization, alkylation & finishing processes

SHORT QUESTIONS:

i) What do you know about abiogenic petroleum theory?

ii) What is abiogenic & biogenic theories of petroleum origin?

iii) What do you understand about migration?

iv) Name four processes in chemical treatment of petroleum products.

v) Mention different unit processes in treatment of crude oil.

vi) What is octane number and how it is improved?

vii) What are products of refining?

viii) Why is isomerization of light naphtha carried out?

ix) Name any four fractions with carbon range obtain from fractional distillation of petroleum.

x) Explain the term isomerization.

xi) What is the role of sweetening process in crude oil refining?

xii) Why desalting of crude oil is important?

xiii) Explain the term reforming of hydrocarbons.

xiv) What is reforming?

xv) Explain the term "alkylation" in petroleum processing.

xvi) What is catalytic alkylation?

xvii) Write name with structures of three sulfur containing compounds found in crude petroleum.

xviii) Describe catalytic cracking with example.

xix) Write two examples of fractional distillation.

LONG QUESTIONS:

i)	Discuss C_4 alkylation process with the help of flow sheet diagram.	**5**
ii)	Describe the composition of crude petroleum.	**5**
iii)	What is octane number & how it can be improved?	**4**
iv)	Briefly explain fractional distillation of petroleum.	**5**
v)	What is catalytic reforming and why it is used?	**5**
vi)	Explain the catalytic reforming of crude oil highlighting the main steps involved.	**5**
vii)	What is catalytic reforming, explain its significance.	**5**