

Roll No.

Total Pages : 03

BT-7/M-20

37226

**PETROLEUM PROCESSING ENGINEERING
CHE-405-N**

Time : Three Hours]

[Maximum Marks : 75

Note : Question paper consists of eight questions, two questions in each Unit. Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. (a) Name the major oil fields in India. Also mention the types of Indian crude oil. What are the different methods for locating the crude oil ?
(b) Why the Crude oil is considered as a non-ecofriendly fuel ? Discuss. **8,7**
2. (a) Discuss the past, present and future of petroleum industry in India. Recommend a suitable strategy to meet the present and future requirement of hydrocarbons.
(b) Write a note on petroleum drilling operations. **9,6**

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Unit II

3. (a) What is lubricating oil ? Explain in brief the various processes that enhance the characteristics of lube oil.
- (b) Write a note on the additives of gasoline, diesel and kerosene. **9,6**
4. (a) Define flash point. Write a detailed note with a neat diagram on EFV distillation.
- (b) Besides naphtha and natural gas, what are the other fractions suitable for manufacturing petrochemicals ? **10,5**

Unit III

5. (a) Explain the process of dewaxing of crude oil with a labelled diagram. Also explain the importance of dewaxing of crude oil.
- (b) Enlist some dewaxing aids. **10,5**
6. Discuss in detail the products and working of a vacuum distillation unit with neat labelled diagram. Give the advantages and limitations of vacuum distillation over atmospheric distillation. **15**

Unit IV

7. Differentiate between Thermal cracking and Catalytic cracking with respect to process conditions, quality of product, efficiency of process and yield. **15**
8. (a) Write a note on the expanded bed hydrocracking process.
- (b) Differentiate between thermal cracking and visbreaking. **8,7**