

Time: 03hrs

Total Marks:80

- N. B.:** (1) **Question No. 1 is Compulsory.**
(2) **Attempt any THREE questions out of remaining FIVE questions.**
(3) **Figures to the right indicate full marks.**
(4) **While explaining the Flow sheets mention Operating Parameters, I/P, O/P etc clearly.**

1. Answer the following questions: **20**
- (a) Explain the various Types of Crudes and Composition of Petroleum.
 - (b) Differentiate between EFV and TBP distillation.
 - (c) Explain Air Blowing of Bitumen Process.
 - (d) Write short note on UOP characterization factor and correlation index.
2. (a) Explain H_2SO_4 Alkylation process with neat diagram and operating conditions. **10**
(b) Explain Environmental Issues Related to Petroleum Refining. **10**
3. (a) Explain Propane Dewaxing Process in detail. **10**
(b) What the different type of Coking methods. Explain Flexi Coking in detail with a flow diagram. **10**
4. (a) Explain Merox Sweetening process for Gasoline. **10**
(b) Explain different tower arrangement used for crude distillation unit with a suitable diagram. **10**
5. (a) Differentiate between electric and chemical desalting process. **10**
(b) Give different testing methods to test quality of kerosene. Explain anyone method in short with a suitable diagram.
6. (a) Discuss in brief the process of furfural extraction for lubricating oil. What is the Advantage of using furfural over phenol? **10**
(b) Explain Catalytic reforming Process in details with Flow diagram. **10**
