

**B.Tech Sem – VIII (2007 Course) (Chemical Engg.) : WINTER  
- 2017**

**SUBJECT: ELECTIVE – II: PETROLEUM REFINING**

Day: **Wednesday**  
Date: **22/11/2017**

Time: **02.30 PM TO 05.30 PM**  
Max Marks: **80**

**W-2017-2646**

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**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from each section.
  - 2) Answers to both the sections should be written in **SEPARATE** answer books.
  - 3) Figures to the right indicate **FULL** marks.
  - 4) Assume suitable data if necessary.
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**SECTION – I**

- Q.1**
- a) Give specification of LPG. **(04)**
  - b) Draw process flow diagram for dehydration. **(05)**
  - c) Give cracking reactions. **(05)**
- Q.2**
- a) Give classification of crude oil with its characteristics. **(06)**
  - b) Write characteristics, application of following petroleum products. **(07)**
    - 1) Engine oil
    - 2) Kerosene
- Q.3**
- a) Draw process flow diagram for vacuum distillation and explain in detail. **(07)**
  - b) How moisture removal is done in petroleum refinery. **(06)**
- Q.4**
- a) Draw process flow diagram of catalytic reforming and explain in detail. **(07)**
  - b) Elaborate coking and its types. **(06)**

**SECTION – II**

- Q.5**
- a) Compare between Sulfuric acid and HF acid refining. **(05)**
  - b) How petroleum products are stored? **(04)**
  - c) Give various types of catalyst used in petroleum industry. **(05)**
- Q.6**
- a) Draw process flow diagram for HF acid refining. Explain in detail. **(07)**
  - b) Elaborate chemical refining in detail. **(06)**
- Q.7**
- a) Discuss the role of additives used in petroleum industry. **(07)**
  - b) What is mean by blending? Give one example. **(06)**
- Q.8** Write short notes on **(13)**
- 1) Recent trends in petroleum in terms of distillation
  - 2) Packing material used for petroleum products.

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