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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Petroleum Refinery Engineering) (2013 Batch) (Sem.-6)

**PETROLEUM REFINING – II**

Subject Code : BTPC-601

Paper ID : [74037]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A****1. Answer briefly :**

- a) Why the sequence is followed to remove ethane, propane, butane and isobutene?
- b) Why methanation cannot be avoided in the hydrogen production process?
- c) What primary disadvantage exists by using live steam in the CDU columns?
- d) What are the operating conditions for catalytic cracking?
- e) What is the function of riser in FCC?
- f) Why naptha stabilization is required after cracking process?
- g) Compare MCCR and FCCR.
- h) What is the function of drier in isomerisation process?
- i) Why is hydrogen used in the reforming reaction?
- j) Definitions of hydroprocessing, hydrotreating and hydrocracking.

### SECTION-B

2. Explain Hydro-cracking with neat sketch. Why two phase separators are used for the reactor product in hydrocracking flowsheet?
3. What is FCC? Discuss about FCC regenerator with neat sketch.
4. Give classification of Hydrocarbons, and discuss Olefinic petrochemicals with applications.
5. Describe the various methods of coke formation.
6. Why the naphtha stream after absorption and phase separation enters a stripping unit?

### SECTION-C

7. Describe Process Technology with flow sheet for Naphtha & Gas oil hydrotreating.
8. Explain three basic reaction steps to achieve alkylation. What are the reaction conditions & process technology for Sulfuric acid based alkylation?
9. Explain Visbreaking with a neat flow sheet.