

Total No. of Pages : 02

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

Subject Code : BTPC-601

Max. Marks : 60

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.

1. Write 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.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.