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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

M.Code : 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**Q1. Write briefly :**

- a) Give the conditions for thermal cracking.
- b) Write the octane number of i-Pentane.
- c) Comment on process intensification in the FCCR.
- d) Write down Various Catalytic Reforming Processes.
- e) What are cyclic fixed bed reformers?
- f) What is Reforming LHSV range?
- g) What are the Advantages Of Bimetallic And Multimetallic Catalyst Over Monometallic Catalyst?
- h) Why the naphtha stream after absorption and phase separation enters a stripping unit?
- i) Why is make up $AlCl_3$ required in the isomerisation process?
- j) Comment upon the HCl distribution between light ends and bottom liquid product in the flash drum.



SECTION-B

- Q2. In the petroleum industry large hydrocarbons from the distillation of crude oil are often cracked to split them into smaller bits. Suggest reasons why this is done.
- Q3. a) Give the conditions for catalytic cracking.
- b) Briefly, what happens to an individual alkane molecule as it splits into smaller bits during catalytic cracking?
- Q4. Define HF process of alkylation with flowsheet.
- Q5. Explain delayed coking with flowsheet.
- Q6. Why desulphurization is necessary?

SECTION-C

- Q7. Write note on various additives in petroleum processes.
- Q8. What are sources of bitumen? Draw the chemical structure of asphalt and write a detailed note on types of asphalt.
- Q9. Draw flowsheet of isomerisation of n-paraffin and explain in detail.

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.