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Total No. of Pages : 02

Total No. of Questions : 09

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

**PETROCHEMICALS**

Subject Code : BTPC-602

M.Code : 74038

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 have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

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

- a) Give two applications of styrene.
- b) List out two chemicals derived from C1 & C2 Hydrocarbons.
- c) What do you mean by LEL and HEL? What is ignition temperature?
- d) What are the process parameters for alkylation?
- e) State the 3 methods of polymerization.
- f) Write down the health hazards of polyurethane.
- g) Give the broad classification of three categories of Petrochemicals.
- h) Write down the chemical reaction for production of nylon.
- i) Write down two important properties of ABS.
- j) What are chemicals obtained from C4 hydrocarbon? Give uses of **any two**.



**SECTION-B**

- Q2. Discuss the utility of alkylation and isomerisation in petroleum industry and explain alkylation with neat flow sheet.
- Q3. Describe the method of manufacturing of vinyl chloride. Also discuss its industrial applications.
- Q4. List the various petrochemicals from methane. Also give their industrial application.
- Q5. Describe with neat flow sheet the manufacturing process of ethylene.
- Q6. Discuss with a neat flow sheet the conversion of ethyl benzene to styrene.

**SECTION-C**

- Q7. Write short notes on the following :
- a) Difference between thermoplastics and thermosetting resins.
  - b) Explain **any one** of isomerisation process with flow chart and reactions involved in it
- Q8. Describe in brief the process of manufacture of PVC, with its properties.
- Q9. What are the reactions involved in the production of BTX? What are the various derivatives obtained from Benzene?

**NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC against the Student.**