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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Petroleum Refinery Engineering) (2013 Batch) (Sem.-8)

PETROLEUM REFINING-III

Subject Code : BTPC-802

Paper ID : [74321]

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. Name two octane improvers.
- b. Illustrate the importance of anti oxidants in crude refineries.
- c. What will be the effect of TEL on gasoline if blended with it?
- d. What do you understand by viscosity index improver?
- e. Illustrate the significance of hydrogenation in refining of crude oil.
- f. Define distillate fuel oil and residual fuel oil.
- g. What are the different Incompatibility in refining operations?
- h. What are the different types of surge volumes?
- i. Write a note on product specification.
- j. Write down the chemical reactions during the manufacturing of MTBE.

SECTION-B

2. Explain with the suitable example why TEL was replaced by MTBE for boosting the octane number.
3. Explain Coking process which is used in up gradation of heavy oil.
4. Explain why and how refinery operating program is developed.
5. Write short notes on :
 - a. Carbon rejection.
 - b. Hydrogen addition.
6. Name the different categories of refinery storage tanks and explain any two with the help of suitable diagram.

SECTION-C

7. Provide all the content of refinery operating program and describe in detail any three of them.
8. Write short notes on :
 - a. Different types of air used in Refinery.
 - b. Why refinery products are so unstable?
9. What is the importance of flare in refineries? Explain in detail the most common flares used in industry.