

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEM-VIII Examination May 2012

Subject code: 180502

Subject Name: Petroleum Refining & Petrochemicals

Date: 12/05/2012

Time: 10.30 am – 01.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1.(A) Write and discuss the role and significance of impurities like Sulfur, Oxygen and Nitrogen present in the crude oil. (07)

(B) Discuss the information needed by the refiners and explain TBP concept with diagram. (07)

Q.2.(A) Explain and discuss about the additives for gasoline. (07)

(B) Write the definition and significance of following: (07)
i) Flash and Fire Point
ii) Aniline point and Diesel Index.

OR

Q.2.(B) What is dehydration and desalting of crudes and describe about electric desalting process (07)

Q.3.(A) Compare thermal cracking and catalytic cracking with reactions. (07)

(B) Discuss about the Phenol extraction of lubes treatment process. (07)

OR

Q.3.(A) What is delayed coking? Describe the delayed coking operation with diagram. (07)

(B) Discuss about catalytic desulfurization treatment technique with diagram. (07)

Q.4.(A) Describe with diagram the manufacturing process of LDPE along with its applications. (07)

(B) Describe manufacturing process with diagram for Styrene butadiene rubber (SBR).with major engineering problems. (07)

OR

Q.4.(A) Discuss the manufacturing process of Vinyl chloride monomer (VCM) also discuss major engineering problems involved in it. (07)

(B) Describe the manufacturing process methanol along with its application (07)

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Q.5(A) Write a note on “Manufacture of Poly vinyl acetate “and mention its major and minor uses.

(B) Explain and discuss production of Propylene with a neat flow sheet. (07)

OR

Q.5(A) Write in brief about manufacture of polystyrene. Enlist different uses of polystyrene. (07)

(B) What is petrochemicals and mention the reasons for studying petrochemical industries. Enlist various petrochemical units in state of Gujarat. (07)
