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Total number of pages : 01

**B.Tech.
PCCH4403**

8th Semester Regular / Back Examination 2017-18

PETROLEUM REFINERY ENGINEERING

BRANCH : CHEM

Time : 3 Hours

Max Marks : 70

Q.CODE : C289

Answer Question No. 1 which is compulsory and any FIVE from the rest.

The figures in the right-hand margin indicate marks.

Answer all parts of a question at a place.

Q1. Answer the following questions : (2 x 10)

- (a) Why aromatics are desirable in gasoline?
- (b) What are Pour point and Cloud point of diesel fuel?
- (c) Interpret the composition of petroleum.
- (d) Outline the general properties of paraffin.
- (e) Define Smoke point and for what purpose it is required?
- (f) Classify the Petroleum according to the type of hydrocarbon.
- (g) Relate Degree API with specific gravity of fraction.
- (h) List out the gasoline which is blended with straight run gasoline.
- (i) Define Octane Number.
- (j) What are the additives used in Gasoline.

Q2. (a) Discuss in brief about the composition of petroleum. (5)

(b) Mention the different pretreatment processes for crude oil. (5)

Q3. (a) What is the need of purification process of petroleum products? (4)

(b) Discuss about two sweetening processes for the removal of sulphur from petroleum products. (6)

Q4. (a) Explain about different theories for formation of crude petroleum in the earth crust. Justify with chemical reaction. (5)

(b) Why Modern theories is widely accepted among all the theories. (5)

Q5. (a) What is cracking? What is its necessity? (5)

(b) With the help of a neat flow diagram explain about the Fluidized Bed Catalytic Cracking process. (5)

Q6. (a) Highlight some points about treatment of Lubes. (4)

(b) Explain about the treatment of kerosene (Edeleanu Process) with a neat flow sheet. (6)

Q7. Discuss in detail about properties of petroleum products by which its quality can be evaluated. (10)

Q8. Write short notes on any TWO : (5 x 2)

- (a) Propane Dewaxing Process
- (b) Acid Treatment
- (c) Oxidation stability
- (d) Reforming