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Total number of printed pages - 01

**B.TECH**  
**PCCH4403**

**8<sup>th</sup> Semester Regular / Back Examination 2015-16**

**PETROLEUM REFINERY ENGINEERING**

**BRANCH : Chemical Engineering**

**Time : 3 Hours**

**Max Marks : 70**

**Question Code : W297**

**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.**

1. Answer the following questions : **2 x 10**
- (a) State the composition of petroleum.
  - (b) State at least four observations or facts enumerated by J. D. Haun in favor of organic theory.
  - (c) Write short note on functioning of ONGC.
  - (d) Write short note on inhibitors for gasoline.
  - (e) What is Cetanenumber?
  - (f) Write the different products obtained from atmospheric distillation of crude oil.
  - (g) Write the different constituents of Natural Gas.
  - (h) State the effect of pressure on cracking.
  - (i) Write the steps for Visbreaking operation.
  - (j) Differentiate between LPG and CNG.
2. (a) Explain the pre-treatments of crude oil. **05**  
(b) State the physical properties and characteristics of LPG. **05**
3. With a neat flow diagram, explain the fluidized-bed catalytic cracking. **10**
4. (a) Discuss briefly the Reid Vapor pressure measurement. **05**  
(b) Explain the vacuum distillation of crude oil. **05**
5. (a) Explain Lead doctoring of Gasoline. **05**  
(b) Write briefly about Merox Sweetening. **05**
6. Explain different additives used in gasoline with their examples and functions. **10**
7. Explain with a neat sketch the Furfural Extraction of Lubes. **10**
8. Write short notes on any **TWO**: **5 x 2**
- (a) Delayed Coking
  - (b) Pipe still heater
  - (c) Refinery off gas
  - (d) Hydro treating
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