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Total number of printed pages - 01

B.TECH
PCCH4403

8th Semester Regular / Back Examination 2016 - 17

PETROLEUM REFINERY ENGINEERING

BRANCH : Chemical

Time : 3 Hours

Max Marks : 70

Question Code : Z276

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) What is API gravity?
 - (b) Define diesel index.
 - (c) Differentiate between dehydration & desalting.
 - (d) Define ADU & VDU.
 - (e) What is blending of gasoline?
 - (f) What is sweetening process?
 - (g) What are the advantages of visbreaking?
 - (h) What is decoking?
 - (i) What is isomerization?
 - (j) Write the chemical structure of asphalt.

2.
 - (a) Explain the theories of petroleum formation. **05**
 - (b) Describe the test of LPG. **05**

3. What are the types of cracking? Describe the fluid catalytic cracking with a neat sketch. **10**

4.
 - (a) What is hydrocracking? Explain the reactions in hydrocracking. **05**
 - (b) Describe the Hydrofluoric acid alkylation in details. **05**

5.
 - (a) Describe the furfural extraction with a neat sketch. **05**
 - (b) Write the classification of petroleum. **05**

6. What is the different treatment process of gasoline? Describe the sulfuric acid treatment process with neat sketch. **10**

7. Write the thermal properties of petroleum products in details. **10**

8. **Write short notes on any TWO:** **5 x 2**
 - (a) Pipe still heater
 - (b) ASTM distillation
 - (c) Air blowing of bitumen
 - (d) Oil reserves in India
