

Sub code: ETCH-113

Q1 What are LCV (NCV) & HCV (GCV)?
write 5 differences.

Q2 What are Octane number & Cetane number?
write 5 differences.

Q3 What is knocking? What are the consequences of knocking? Write about additives for improving anti-knocking properties.

Q4 What is Petroleum? How various components are separated. Draw the diagram.

Q5 What is the difference between internal combustion engine & compression ignition engine.

Q6 What is cracking? Write the types of cracking in detail. What are fixed bed & moving bed or fluidized bed catalytic cracking?

What are the advantages of catalytic cracking over thermal cracking?

Write the mechanism of thermal & catalytic cracking

What is pulverized coal? What are its advantages & disadvantages of Pulverised coal?

Assignment, 2 B. Tech 1 year
Unit: I: Fuel

- Q1 What are proximate & ultimate analysis of coal? describe the methods in detail.
- Q2 What is carbonization of coal?
- Q3 Why coke is a better fuel than coal for metallurgical processes?
- Q4 Write 5 differences between coal & coke.
- Q5 Describe low temperature & high temperature of carbonization.
- Describe Beehive's oven method & Otto Hoffmann's oven method of manufacturing metallurgical coke.
- How recovery of byproducts is done from coke oven gas?
- How flue gas analysis is done by Orsat's apparatus?
- Numericals in 'Shashi Chawla' book should be done.

