

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter - 2019 – 20 Examinations

Semester: 5
Subject Code: 03103330
Subject Name: Petrochemical Technology

Date: 03/12/2019
Time: 10:30am to 1:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions.

(15)

1. Mention various petrochemicals obtained from Ethylene.
2. Hydro-cracking is
 - a) Addition of hydrogen
 - b) Addition of Carbon
 - c) Rejection of hydrogen
 - d) All
3. Vis-breaking is
 - a) Reduction of Temperature
 - b) Enhancement of Velocity
 - c) Reduction of Viscosity
 - d) Both (a) and (b)
4. Enlist major petrochemical units in India.
5. Write down the composition of crude oil.
6. Which catalyst used in the manufacturing of vinyl chloride monomer?
7. What you mean by Benzene derivatives?
8. List out the applications of Formaldehyde.
9. Explain the Origin of Petroleum.
10. How Quenching takes place in any process?
11. Caprolactam (CPL) is used to manufacture of which polymer?
12. List out the application of polyethylene.
13. State various methods for the production of Methanol.
14. How Vis-Breaking Takes place as a cracking?
15. List out the major components of Petrochemicals.

Q.2 Answer the following questions. (Attempt Any three)

(15)

- A) Explain convention zone and Radiation zone in Naphtha cracking.
- B) Explain the major Primary reactions in Catalytic cracking.
- C) Give the difference between Hydro cracking and Hydro treating.
- D) Define the following terms:

Paraffin, Vis-breaking, Naphtha ,Di-olefins, Polymer

Q.3 A) Define: Initiation, Propagation and Termination for Thermal cracking.

(07)

B) Explain in brief uses of Miscellaneous materials.

(08)

OR

B) Explain Manufacturing of Methyl Alcohol (Methanol).

(08)

Q.4 A) Explain Modern plant of Production of Ethylene with flow sheet with description

(07)

OR

A) Explain manufacturing process of formaldehyde from methanol with flow sheet.

(07)

B) Explain (FCC) Fluidized Catalytic Cracking with neat sketch.

(08)