MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (CHEMICAL ENGINEERING)

END SEMESTER EXAMINATIONS DEC-JAN 2020-2021

SUBJECT: PE-VI   PETROCHEMICALS [CHE 4003]

REVISED CREDIT SYSTEM

Date of Exam: 01/01/2021

Time: 09:00 AM- 12.00 NOON

MAX. MARKS: 50

Instructions to Candidates:
- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.
- ❖ Each question carries equal marks (5X10=50)
- ❖ Avoid free hand drawing while making flow diagram.

1A.	Write down the names and uses of the thermoplastics for following codes.	3
1B.	Write down the Wulff process for acetylene production along with chemical reactions.	3
1C.	Discuss the production process of synthesis gas by steam reforming of hydrocarbon along with chemical reactions. (Flow diagram not required)	4
2A.	Discuss the production process of methanol from synthesis gas. Write down chemical reactions, production process and process flow diagram.	5
2B.	Discuss the production process of acetone from isopropanol. Write down chemical reactions, production process and process flow diagram.	5
3A.	Discuss the separation and purification process of crude butadiene, which is generated from butadiene tower. Discuss each units and in detail. (Flow diagram not required)	4
3B.	Discuss the production process of benzene from toluene. Write down chemical reactions, production process and process flow diagram.	6

4A.	Discuss styrene production process along with chemical reactions, production process and process flow diagram.	8
4B.	Write down 2 differences among bulk, solution, emulsion and suspension polymerization.	2
5A.	Mention the names and draw the chemical structures of polypropylene based on the different stereotactic arrangement of pendent methyl group. Discuss how this can affect the crystallinity and physical properties	4
5B.	Write down the chemical formula and production process of dacron-maylar polyesters.	6

--- All the best ---