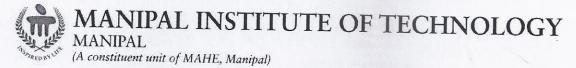
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## VII SEMESTER B.TECH. (CHEMICAL ENGINEERING)

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
3В.	Discuss the production process of benzene from toluene. Write down chemical reactions, production process and process flow diagram.	6

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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		
5B.	Write down the chemical formula and production process of dacron-maylar polyesters.	6	

--- All the best ---