

Reg. No.



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A Constituent Institution of MAHE, Manipal)

Makeup EXAMINATIONS, NOV/DEC 2018

SUBJECT: CHEMICAL PROCESS INDUSTRIES [CHE3104]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

1A.	Explain the manufacture of rubber with the help of neat diagram.	3
1B.	Clearly explain the manufacture of urea with a help of neat flow diagram.	3
1C.	Draw a neat flow diagram for the manufacture of air and clearly explain the manufacture of paper (each step separately).	4 (1+3)
2A.	With the help of a neat flow diagram explain the manufacture of nylon.	3
2B.	Define Fermentation. Explain the role of main elements in the cell growth.	4 (1+3)
2C.	Draw the flow chart and explain the manufacture of acetone using fermentation process.	3
3A.	Define pulp. Clearly explain various methods of pulp production.	3
3B.	Draw a neat flow diagram of petroleum refining process and explain any six units in the process.	4
3C.	What is syngas? Explain any two preparation methods for producing syngas.	3
4A.	Draw a neat diagram and with the reaction equations explain the manufacture of NaOH from diaphragm process.	3
4B.	Clearly explain the modified Haber and Bosch process with the help of a neat flow diagram.	4
4C.	Explain the Den's process and write about the handling, storage and kinetics issues in this manufacture process (No diagram needed).	3
5A.	Clearly explain with the help of a neat flow diagram the purification process of CO ₂ (both processes).	3 (1+2)
5B.	With the help of neat diagram explain clearly the manufacture of Rayon.	4
5C.	Explain the lead-chamber process for the manufacture of H ₂ SO ₄ with the help of flow diagram and reaction equations.	3