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B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019

Sixth Semester

CH16603 – CHEMICAL PROCESS INDUSTRIES II*(Chemical Engineering)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**Answer **ALL** questions**PART A - (10 X 2 = 20 Marks)**

	CO	RBT
1. Write the reaction for the sulfate process.	1	R
2. Mention by-products of sugar manufacture.	1	R
3. Write any two types of Surfactants.	2	U
4. Which type of alkali is added to remove the free fatty acid in oil-extraction?	2	U
5. What are petrochemical precursors?	2	U
6. Compare between flash point and fire point.	3	U
7. Distinguish between thermoplastic and thermosetting?	3	U
8. Write any two applications of natural and synthetic polymers.	3	AP
9. List out the common reinforcing fibres.	4	U
10. Highlight upon any two properties and applications of resins.	4	AP

PART B - (5 X16 = 80 Marks)

11. (a) With the help of a neat flow chart, discuss the various stages involved in the manufacture of paper. (16) 1 U
- (OR)**
- (b) (i) Briefly write about cellulose derivatives. (8) 1 U
- (ii) Discuss about starch and starch derivatives. (8) 1 U
12. (a) Write short notes on the following (16) 2 U
- i. Refining of oils
 - ii. Bleaching
 - iii. Hydrogenation

iv. Deodorization

(OR)

- (b) Describe in detail any two extraction methods of vegetable oils and animal fats with neat sketch. (16) 2 U
13. (a) With a neat flow sheet explain H_2SO_4 & HF acid alkylation Processes and give major applications of both the processes. (16) 3 AP
- (OR)
- (b) Enumerate in detail about the following (16) 3 AP
- (i) Uses and Properties of lubricating oils
- (ii) Catalytic and hydro Cracking
14. (a) Explain the manufacturing of styrene-butadiene rubber with a neat flow sheet. (16) 3
- (OR)
- (b) Write short notes about the following (8+8) 3 AP
- (i) Properties and Applications of Resins.
- (ii) Any two types of Polymerization processes with examples.
15. (a) With a neat sketch explain major applications and engineering problems associated with production of Cellulose Acetate and PVC. (8+8) 4 AP
- (OR)
- (b) Describe the manufacture of Nylon 6 6 with a neat flow chart and explain major applications and engineering problems encountered in the process. (16) 4 AP