



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 151403

Roll No.

--	--	--	--	--	--	--	--	--	--

B. Tech.

(SEM. IV) THEORY EXAMINATION, 2014-15
CHEMICAL TECHNOLOGY - I

Time : 3 Hours]

[Total Marks : 100

Note : Attempt questions from each section as per instructions.

SECTION - A

1 Attempt all parts of the following : **2×10=20**

- (a) Differentiate between soap and detergents.
- (b) How will you recover the chemicals in pulp and paper industry ?
- (c) Explain the manufacturing of fatty acids in continuous plants.
- (d) How are petroleum products classified ?
- (e) Differentiate between Natural fiber and Synthetic fiber.
- (f) What are the various chemicals obtained from coal ?

- (g) What is Rayon ? Give their uses.
- (h) Name five synthetic fiber available for commercial uses.
- (i) What are the various antibiotics that are commonly used for the medicine ?
- (j) Difference between unit process and unit operation.

SECTION - B

2 Attempt **any three** of the following : 10×3=30

- (a) Explain alkyl-aryl sulphonate process involved in detergent manufacturing, with reactions and flow sheet.
- (b) Explain the manufacturing process of SBR with neat flow diagram with the chemical reaction involved during the process.
- (c) Explain the various steps required to obtain tanned leather from hides. Also write the operating conditions with the reactions, if involved.
- (d) How is paper manufactured from pulp ? Explain the process with neat flow diagram.
- (e) Differentiate between soft wood and Hard wood. What are the various products obtained on wood distillation ? Explain with procedure.

SECTION - C

3 Attempt all question in this section : **10×5=50**

- (a) What is delayed coking ? Explain the process of coking with suitable diagram.
 - (b) What is catalyst poisoning ? Discuss the Catalytic reforming with reaction involved.
 - (c) Discuss the solvent characteristics used for extraction of lube oil. Give the comparison of furfural, NMP and phenol.
 - (d) Explain, with neat flow diagram, the manufacturing of ethyl alcohol. Also write the reaction involved during the process.
 - (e) Why is it required and how does the catalyst play an important role on hydrogenation of edible oils.
-