

- Q.24** Discuss the different factors affecting the selection of location for setting up the new paper industry in detail?

Q.25 Describe the paper making process in detail with the help of process flow diagram depicting the various unit processes and unit operations involved?

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1st Year / Chemical Engg (P&P)
Subject : Introduction to chemical engineering
& Paper Technology

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 What was the name of first chemical pulping process?

a) Lime process b) Soda process

c) Chloride process d) Bromide process

Q.2 What is value of 25°C temperature on kelvin scale?

a) 288 K b) 298 K

c) 308 K d) 318 K

Q.3 The first paper machine was constructed by Louis-Nicholas Robert in which year?

a) 1599 b) 1699

c) 1799 d) 1899

Q.4 Which one of the following constituents is present in highest percentage in softwood?

(80)

(4)

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- a) Lignin b) Glucomannan
 c) Hemicelluloses d) Cellulose
- Q.5 Which of the following represent a unit operation.
 a) Adsorption b) Halogenation
 c) Combustion d) Polymerization
- Q.6 What is value of displacement ratio for a perfect displacement process?
 a) 0 b) 0.5
 c) 1 d) 1.5

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 What is white liquor?
 Q.8 Define force.
 Q.9 Write the name of any one unit process?
 Q.10 What is bath ratio?
 Q.11 Industrial pulping involves the large-scale liberation of fibers from which type of material?
 Q.12 What is value of 15 J of work in erg?

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SECTION-C

- Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)
- Q.13 What is difference centroid and centre of gravity?
 Q.14 What is the role of a paper technologist in the paper industry.
 Q.15 What is dilution factor? How it is calculated?
 Q.16 Define and discuss steam economy in brief.
 Q.17 What is pulp consistency? Discuss its significance?
 Q.18 State and explain polygon law of forces in brief?
 Q.19 Explain the concept and importance of unit operations?
 Q.20 What is difference between cellulose and hemicelluloses?
 Q.21 Discuss the need and importance of fiber morphology in brief.
 Q.22 Define and discuss washing efficiency in brief.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)
- Q.23 How will you classify the different raw material used for obtaining pulp for the manufacture of paper? Discuss each type in brief?

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