

- Q.24 What are pulp digesters? Describe the different types of continuous digesters used in the paper industry in detail?
- Q.25 How will you classify the different fibrous raw materials used in the manufacture of paper? Discuss each type in detail along with their sources?

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**3rd Sem / Branch : Chemical (Pulp & Paper)
Sub.: Pulping Processes**

Time : 3Hrs.

M.M. : 60

SECTION-A

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

- Q.1 Bagasse belongs to which of the following type?
- a) Agro residue fiber
 - b) Wood fiber
 - c) Seed fiber
 - d) None of these
- Q.2 Liquor exiting the digester with the cooked chips is called?
- a) White liquor
 - b) Black liquor
 - c) Green liquor
 - d) Red liquor
- Q.3 The process through which the pulp is separated from large shives, knots etc. is known as?
- a) Screening
 - b) Pickling
 - c) Cutting
 - d) Shredding
- Q.4 Which of the following process is used to treat all types of woods for pulping process?
- a) Mechanical pulping
 - b) Chemical pulping

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- c) Semi chemical pulping
 - d) None of these
- Q.5 Which of the following is not a constituent of wood based raw material?
- a) Carbon
 - b) Oxygen
 - c) Sulphur
 - d) Hydrogen
- Q.6 Which of the following terms depicts the sum of Na chemicals that will produce OH during kraft pulping?
- a) Total alkali
 - b) Active alkali
 - c) Total titrable alkali
 - d) Effective alkali

SECTION-B

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

- Q.7 Write the name of any one leaf fiber used for making paper?
- Q.8 What is the baggase?
- Q.9 Write the name of one physical debarking method?
- Q.10 Define the pulping?
- Q.11 What is chip screening?
- Q.12 Write the name of any one macromolecular substance is present in the cell wall of the hardwood?

SECTION-C

- Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)
- Q.13 Describe the concept of chemical pulping in brief?
 - Q.14 What are extractives? Discuss their importance?
 - Q.15 Describe the rotary digester in brief?
 - Q.16 What is difference between wood pulp and non-wood pulp?
 - Q.17 What is pulp consistency? Discuss its importance?
 - Q.18 Discuss the different factors affecting the selection of raw material for pulping?
 - Q.19 What is the difference between active alkali and effective alkali?
 - Q.20 What is lignin? How it affects the quality of pulp?
 - Q.21 Define and discuss secondary fiber pulping in brief?
 - Q.22 Explain the significance and occurrence of hemicelluloses in brief?

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)
- Q.23 Describe the different steps involved during the raw material processing in a pulp mill with the help of a neat block diagram?