

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What is chemical pulping? Describe the kraft pulping process used in the paper industry in detail.
- Q.24 Describe the different methods used for physical debarking in a pulp mill in detail.
- Q.25 Describe the process of pulp and paper making in detail with the help of a neat block diagram.

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**3rd Sem. / Chemical
(Pulp & Paper)**

Subject : Pulping Processes

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 Pulp is a
- a) lignocellulosic material
 - b) synthetic material
 - c) inorganic material
 - d) organophosphatic material
- Q.2 Which of the following terms depicts the sum of all of the bases in the white liquor that could be titrated with strong acid?
- a) total alkali
 - b) total titrable alkali
 - c) active alkali
 - d) effective alkali
- Q.3 Which of the following is a main constituent of wood based raw material?
- a) carbon
 - b) nitrogen
 - c) sulphur
 - d) sodium

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Q.4 Bamboo is classified as which of the following type?
a) wood fiber b) leaf fiber
c) stalk fiber d) seed fiber

Q.5 Which of the following is not a debarking equipment used in pulp industry?
a) rotary debarker
b) drum debarker
c) reciprocating debarker
d) ring debarker

Q.6 Which of the following macromolecular substances is present in the highest quantity in the hardwood on percentage basis?
a) lignin b) cellulose
c) hemicellulose d) none of these

SECTION-B

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

Q.7 Write the name of one chemical pulping method?

Q.8 What is the pulp?

Q.9 Write the name of any one seed fiber used for making paper.

Q.10 What is the bamboo?

Q.11 Write the name of any one chipper used in pulp industry.

Q.12 Define the sulphidity.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 What is the difference between white liquor & black liquor?

Q.14 What is debarking? Why it is done?

Q.15 Discuss the different types of fibers used for making pulp in brief.

Q.16 Define and discuss causticity and causticizing efficiency.

Q.17 Discuss the structure and significance of cellulose in brief.

Q.18 What are advantages of continuous digesters over batch digesters?

Q.19 Describe the different factors affecting quality of pulp obtained from mechanical pulping.

Q.20 Explain the morphological analysis of fiber in brief.

Q.21 Describe the different types of screens used in chip screening in brief.

Q.22 What is bio-pulping? Discuss its importance in brief.