

- Q.24 Briefly discuss fibre morphology.
- Q.25 Draw a block diagram to give an overview of paper making process.

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Roll No.

1st Sem. / Chem P & P

Subject : Introduction to Pulp & Paper Technology

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

- Q.1 paper can be made from
- a) soft wood b) hard wood
- c) grass d) all of the above
- Q.2 Wood of walnut tree is an example of
- a) hard wood b) soft wood
- c) both a & b d) none of the above
- Q.3 The composition of effective alkali is
- a) $\text{NaOH} + \text{Na}_2\text{S}$ b) $\text{NaOH} + 1/2 \text{Na}_2\text{S}$
- c) Na_2CO_3 d) NaHCO_3
- Q.4 Name the sugars produced by hydrolysis of hemicellulose

- a) hexoses b) pentoses
- c) both a & b d) none of the above

Q.5 Lighter wood is also known as

- a) late wood b) summer wood
- c) spring wood d) none of the above

Q.6 The liquor consisting of $\text{Na}_2\text{CO}_3 + \text{Na}_2\text{S}$ is

- a) green liquor b) black liquor
- c) white liquor d) none of the above

SECTION-B

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

- Q.7 Define pulp.
- Q.8 Define hemicellulose.
- Q.9 Define pulp consistency.
- Q.10 Define cooking cycle.
- Q.11 Define pulp bleaching.
- Q.12 Define pulp washing.

SECTION-C

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

- Q.13 What are the applications of paper?
- Q.14 Write the names of 4 paper mills in India?
- Q.15 What are the properties of extractives?
- Q.16 What do you mean by permanganate no?
- Q.17 Write a short note on secondary wall of fibre.
- Q.18 What do you mean by displacement ratio?
- Q.19 Write a short note on sulphate pulping.
- Q.20 What do you mean by pulp refining? Explain briefly.
- Q.21 What are different chemical components of wood? Name them.
- Q.22 Define pulping. Name different types of pulping.

SECTION-D

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

- Q.23 a) What are the problems of paper industry?
- b) Briefly describe the following terms-
causticity
causticizing efficiency