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Roll No.

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1st Year / Chemical Engg. (P&P)

**Subject : Introduction to Chemical Engineering and
Paper Technology**

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

Q.1 Raw material used to make paper is_____.

- a) Glass b) Stone
- c) Fiber d) Plastic

Q.2 Bath ratio (chips to liquor) is equal to _____.

- a) 1:3 b) 2:4
- c) 1:5 d) 2:5

Q.3 Choose the fruit fiber.

- a) Silk b) Cotton
- c) Wool d) None

Q.4 Lignin is a _____ material.

- a) Plastic b) Inorganic
- c) Cementing d) None

- Q.5 _____ is a process for making paper pulp.
- a) Chemical b) Mechanical
c) Semi chemical d) All of above
- Q.6 Chipping is necessary to increase _____ of wood.
- a) Pressure b) Surface area
c) Temperature d) None

SECTION-B

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

- Q.7 Name any two paper industry in India.
- Q.8 Where is white liquor used?
- Q.9 What is ash?
- Q.10 Write any one property of hemicellulose.
- Q.11 Mention any one use of digester.
- Q.12 Write any one use of petro chemicals.

SECTION-C

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

- Q.13 What is dilution factor?

- Q.14 Define paper and paper board.
- Q.15 How to calculate kappa number of pulp? Explain.
- Q.16 Briefly explain paper industry in India.
- Q.17 Write properties of cellulose.
- Q.18 Define steam economy.
- Q.19 What is green liquor.
- Q.20 Write a note on cooking cycle.
- Q.21 Write a note on manufacturing of cement.
- Q.22 Define specific gravity.

SECTION-D

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

- Q.23 Explain the process of paper making with block diagram.
- Q.24 What is the classification of various fibrous raw materials? Explain in detail.
- Q.25 Write short note on any two of the following:
- a) Washing efficiency
b) Fiber morphology
c) Unit process in chemical industry
d) Manufacturing of fertilizers