

## **SECTION-D**

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

- Q.23 Describe the Washing Principle and construction of Brown stock washer in detail with and diagram.
- Q.24 Discuss Multi-stage Bleaching Process with the help of neat flow diagram in detail with its advantages and Disadvantages .
- Q.25 Explain any two.

- 1) Soda loss and its Importance
- 2) Centri-Cleaner
- 3) Alkali Extraction

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

**Subject : Pulp Washing and Bleaching**

Time : 3 Hrs.

M.M. : 60

## **SECTION-A**

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

- Q.1 On Which principle Screening is based?
- a) Shape
  - b) Length
  - c) Size
  - d) All of these
- Q.2 Best quality Paper can be made by
- a) Softwood
  - b) Hardwood
  - c) Grass
  - d) All of these
- Q.3 What is the chemical formula of caustic soda?
- a) NaOH
  - b) Na<sub>2</sub>CO<sub>3</sub>
  - c) Na<sub>2</sub>OH
  - d) None of these

Q.4 Pulp of paper industry does not consist \_\_\_\_\_ part in the making of paper.

- a) Bleaching
- b) Pulp washing
- c) Chipping of wood
- d) None of these

Q.5 Which process is not used in paper industry

- a) Making of Pulp
- b) Stock preparation
- c) mining
- d) chipping of wood

Q.6 Which of the following one is formula of bleaching powder?

- a)  $\text{Ca}(\text{ClO})_2$
- b)  $\text{CaO}_2$
- c)  $\text{CaCO}_3$
- d)  $\text{CaO}$

## SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory.  $(6 \times 1 = 6)$

Q.7 Give one disadvantage of diffusion washing.

Q.8 Write SI unit of Pressure.

Q.9 Define screening.

Q.10 Which factor effect the cleaning of pulp.

Q.11 Name any two Paper Industries.

Q.12 Name of washer used in BSW washing.

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $(8 \times 4 = 32)$

Q.13 Write a note washing Efficiency.

Q.14 Define copper Number.

Q.15 Differentiate peroxide and oxygen bleaching.

Q.16 What is dilution factor and displacement rate.

Q.17 Write a note on Bleaching powder and its use in Paper industry.

Q.18 Write about Hypochlorite bleaching with its use.

Q.19 Write a note on Black liquor and white liquor?

Q.20 Discuss any one Washer with its Diagram?

Q.21 Write a note on ozone Bleaching.

Q.22 Write a note on Screening and Cleanliness efficiency.