

Q.30 What is oxygen bleaching?

Q.31 Write bleaching demand of 120 tonn unbleached pulp if bleachability is 12%

Q.32 Write the objective of alkaline extraction.

### SECTION-D

**Note:** Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Explain the working of agitators & chlorine mixer used in bleaching plant.

Q.34 Make a flow diagram of multistage bleaching process. Write its merits & demerits.

Q.35 Describe the manufacturing process of hypochlorite in paper industry.

Q.36 Write short note on

a) Ozone bleaching.

b) COD & BOD.

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**2nd Year / 3rd Sem. / Chem, P&P**

**Subject : Pulp Bleaching**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Objective type questions. All questions are compulsory (10x1=10)

Q.1 Define pH.

Q.2 Expand CEHH.

Q.3 What is chemical name of HOCl?

Q.4 Name types of tower.

Q.5 Expand COD.

Q.6 What is common bleaching sequence?

Q.7 Name one oxidizing agent?

Q.8 Name any one variable which accelerate the color reversion.

(60)

(4)

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Q.9  $\text{Cl}_2 + \text{H}_2\text{O} \rightleftharpoons \text{HOCL} + \underline{\hspace{2cm}}$ .

Q.10 Name the chemical used in ozone bleaching.

### SECTION-B

**Note:** Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11 Which factors accelerate the color reversion?

Q.12 What do you understand by 15% bleachability?

Q.13 Write function of chlorine mixer.

Q.14 Define buffer solution.

Q.15 Why soda pulp is easier to bleach than sulphate pulp.

Q.16 Write molecular weight of sodium chlorite.

Q.17 Give applications of chelating agent.

Q.18 Name one hazardous chemical formed due to  $\text{Cl}_2$  bleaching.

Q.19 What do you mean by soda loss.

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Q.20 How much consistency of pulp is maintained in peroxide bleaching.

Q.21 Name the objective of bleaching.

Q.22 Define Kappa No.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Write the effect of pH on chlorination.

Q.24 Draw a neat sketch of chlorine mixer & explain.

Q.25 Explain one parameter which effect cellulose during bleaching of pulp.

Q.26 Explain CEH & CEHEPED stages.

Q.27 Define Brightness reversion.

Q.28 What is peroxide bleaching?

Q.29 Explain total chlorine free (TCF) & Elemental Chlorine free (ECF) bleaching.

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