

- Q.28 Define copper.
- Q.29 What is soda loss? Why it is to be reduced?
- Q.30 What is the importance of dilution of pulp?
- Q.31 Explain the alkaline extraction used in the bleaching process?
- Q.32 What are the various conditions maintained in the bleached tower?
- Q.33 What is total chlorine free bleaching? Discuss its importance?
- Q.34 Explain the function of Rota meter.
- Q.35 Write any two uses of sulphamic acid in bleaching.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Describe the manufacturing process of chlorine dioxide in industry with a neat diagram.
- Q.37 What are the various process for measuring bleachability. Explain in detail.
- Q.38 Write short note on:-
- Post color number
 - Chlorine mixer

No. of Printed Pages : 4

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Roll No.

3rd Sem / Chem. P & P Subject:- Pulp Bleaching

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Choose the formula of sulphamic acid.
- H_3NSO_3
 - H_2SO_4
 - HNO_3
 - $\text{H}_4\text{N}_2\text{SO}_2$
- Q.2 Choose condition maintained in alkali tower
- Pulp weight
 - Temperature
 - Pulp flow
 - None
- Q.3 What is the pH range in hypo tower of bleaching section
- About 5
 - About 11
 - About 25
 - About 20
- Q.4 Expand PH
- Potential hydrogen
 - Power hydrogen
 - Pure hydrogen
 - None

- Q.5 What is the purpose of Agitator?
- Stirring
 - Cutting
 - Bleaching
 - Slushing
- Q.6 What is the chemical formula of hydrogen peroxide?
- HO_2
 - H_2O
 - HO
 - H_2O_2
- Q.7 What is color of pulp after bleaching?
- White
 - Pink
 - Blue
 - Black
- Q.8 Choose the reductive chemical
- Co_2
 - Ca
 - H_2O
 - Cl
- Q.9 Which tower is known as upward flow tower?
- Hypo tower
 - Alkali tower
 - Cl_2 tower
 - None
- Q.10 Choose the unit of consistency
- kg
 - C
 - %age
 - None

SECTION-B

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

- Q.11 In which stage of bleaching NaOH is used?

- Q.12 Why agitator is used?
- Q.13 Write the formula of bleaching powder.
- Q.14 What is the purpose of calcium hypochlorite?
- Q.15 What is the purpose of using chlorine in chlorine tower?
- Q.16 Give name of two chlorine mixers.
- Q.17 Expand CEH bleaching sequence.
- Q.18 Name one reducing agent.
- Q.19 Write optimum PH in chlorination bleaching scope.
- Q.20 Name any one oxidative bleaching chemical.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What is the effect of PH on chlorination stage?
- Q.22 What are the various variables used in bleaching process?
- Q.23 Define Ozone bleaching.
- Q.24 Write short note on brightness reversion of bleached pulp.
- Q.25 Differentiate peroxide and oxygen bleaching.
- Q.26 How chlorine dioxide is prepared.
- Q.27 What is significance of KMnO_4 number?