

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Write short notes on.

- a) Tower b) Mixer

Q.4 Give characteristics of peroxide bleaching and Discuss fermentations of various chemicals used in peroxide bleaching.

Q.5 Write short notes on.

- a) Ozone bleaching
b) Brightness Reversion

Q.6 Name various methods used for manufacturing of chlorine dioxide. Discuss any one method in details.

Q.7 Calculate volume in m³ of bleach liquor having strength equal to 45 gpl to bleach 325 ton unbleached pulp having 12% bleachability.

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No. of Printed Pages : 4

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3rd Sem. / Chemical Engg. (Pulp & Paper Tech)

Subject : Pulp Bleaching

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Expand ECF.

b) Write pH range for alkaline medium.

c) Define per magnate number.

d) Write chemical formula of bleaching powder.

e) Expand CEHEH.

f) Write uses of chlorine tower.

g) Define pulp consistency.

h) Write optimum variables in hypochlorite stage.

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- i) Write equivalent weight of chlorine.
- j) Expand BSW.
- k) Define CEHPD.
- l) What is Hypo chlorous acid?
- m) Name types of agitater.
- n) Write chemical formula of sodium hydroxide.
- o) Define hypo number of pulp.
- p) Name bleaching variables.
- q) Write equivalent weight of sulfuric acid.
- r) Expand CEHH.
- iv) Explain post colour number.
- v) Calculate bleach demand of 375 ton unbleached pulp of bleachability of pulp is 11%.
- vi) Write advantages of multistage bleaching over single stage bleaching.
- vii) Calculate bleachability of pulp if kappa number of pulp is 15.
- viii) Discuss objectives of bleaching.
- ix) Explain Cl_2 water system.
- x) Discuss peroxide bleaching.
- xi) Explain copper number of pulp.
- xii) Write uses of sulphuric acid.
- xiii) Discuss total chlorine free stage.
- xiv) Write chemical formula of sodium hypochlorite and hydro chloric acid.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) Draw a neat sketch of agitator.
 - ii) Explain chlorine dioxide slage.
 - iii) Discuss kappa number method for measurement of bleachability.

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