

Q.24 Define bleachability of pulp. Discuss latest method of measurement of bleachability in paper industry

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Roll No. ....

Q.25 Explain any two:

- a) Brightness reversion of Bleached pulp
- b) Pressure screen
- c) Oxygen Bleaching

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

**Subject : Pulpwashing and Bleaching**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

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

Q.1 Choose objective of pulp bleaching

- a) Saving of chemicals    b) saving of pulp fiber
- c) Gain in brightness    d) None of the above

Q.2 Expand BSW

- a) Brown stock waste    b) Brown stock wire
- c) Brown stock washer    d) None of the above

Q.3 From what stage of BSW B/L goes for recovery plant

- a) BSW 1st                      b) BSW 2nd
- c) BSW 3rd                      d) All of the above

Q.4 Degree of delignification of kraft pulp is measured by \_\_\_\_\_ method.

- a) Meter                              b) Temperature
- c) Pressure                              d) Kappa no

Q.5 What is the unit of vacuum ?

- a) Degree                      b) Milibar
- c) Kilogram                  d) All of the above

Q.6 Expand TCF.

- a) Total Cock fresh      b) Total cash free
- c) Toatl Chlorime free   d) None of the above

### SECTION-B

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

Q.7 What is the principle of cleaning?

Q.8 What is the role of consistency in pulp washing?

Q.9 Write concentration range of B/L after BSW first stage?

Q.10 Give one reason for necessity of screening of pulp

Q.11 Mention one disadvantage of high heat diffusion washing

Q.12 Write use of chlorine tower

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### SECTION-C

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

Q.13 Briefly describe the principle of bleaching of pulp

Q.14 Write any five objectives of washing

Q.15 Define barometric leg

Q.16 Why gravity centrifugal screen is used for pulp?

Q.17 Write the name of any five washing equipments

Q.18 Write optimum process variables in hypochlorite bleaching stage

Q.19 Write an expression for screening quotient

Q.20 Draw a neat sketch of two stage centricleaner

Q.21 Explain co-current

Q.22 Explain counter current.

### SECTION-D

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

Q.23 Explain in detail construction and working principle of three stage counter current with a neat diagram.

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