

xv) With neat sketch, explain the working of vertical tube evaporator.

### SECTION-C

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

- Q.3 With neat sketch, explain the working of grizzlies used for size separation and state its merits and demerits with other methods used for size separation.
- Q.4 Explain construction and working of Hammer Mill.
- Q.5 Name the various driers used in textile industry and explain the construction and working of any one drier.
- Q.6 Name any four industries where distillation process is carried out. Explain the concept of equilibrium distillation and rectification.
- Q.7 Define and explain the significance of ultimate and proximate analysis of coal.

No. of Printed Pages : 4

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**5th Sem. / Textile Chemistry**

**Subject : Basics of Chemical Engineering**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

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

- Q.1 a) Define unit operation.
- b) Define mesh number.
- c) What is meant by particle size 8/10?
- d) State difference between crushing and grinding.
- e) Name any two grinders.
- f) Define drying.
- g) Name any two evaporators.
- h) Define distillation.

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- i) Name any four volatile solvents.
- j) What is meant by ash in coal?
- k) Name any four fuels other than solid fuels.
- l) Define combustion of fuel.
- m) Define wet corrosion.
- n) Is Acetone a hazardous chemical?
- o) State the causes of corrosion.
- p) State precautions in handling hazardous chemicals.
- q) With one example, define mixing.
- r) Explain the importance of size reduction in industry.
- ii) Name any four unit operations and explain any one in brief.
- iii) Explain cumulative analysis in mechanical separation.
- iv) Explain working of Ball Mill.
- v) Write a note on mixing machines.
- vi) Give the classification of dryers.
- vii) Differentiate between evaporation and distillation.
- viii) Explain the significance of Boiling point diagram in distillation.
- ix) Explain storage and handling of solvents.
- x) Describe the types of Indian coal.
- xi) Explain theory of combustion of fuel.
- xii) Name various remedies adopted to minimize corrosion.
- xiii) Write a note on industrial hazards in chemical industries.
- xiv) Draw neat sketch of 'Jaw Crusher'.

### SECTION-B

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

- Q.2 i) Define chemical engineering and explain its role in textile industry.

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