

- Q.32 What is manufacturing process for single super phosphate
- Q.33 Describe dry manufacturing process of Portland cement
- Q.34 Write process for manufacturing of urea
- Q.35 Write all the raw material used for Ammonia.

SECTION-D

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

- Q.36 With neat flow chart, explain manufacture the sulphuric acid.
- Q.37 With neat flow chart, explain manufacture the sugar.
- Q.38 With neat flow chart, explain manufacture the paper.

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4th Sem / Branch : CHEMICAL ENGINEERING
Subject:- Chemical Technology

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Paper pulp produced by Kraft / Sulphate process is
 a) Bleached Easily b) Dull white in color
 c) Strong Fibrous d) Dark colored
- Q.2 Sulfuric acid saturated with SO₃ is called
 a) Concentrated H₂SO₄ b) Sulphurous Acid
 c) Oleum d) None
- Q.3 Catalyst used during the manufacture of 'Vanaspati ghee'
 a) Zinc b) Nickel
 c) Platinum d) None
- Q.4 Which of the following is not a pyrite ore ?
 a) celestite b) Galena
 c) Gypsum d) None
- Q.5 Starting raw material for the manufacture of alum is
 a) Alumina b) Gypsum
 c) Bauxite d) None

- Q.6 Frasch process is for
a) Making Oxygen b) Mining Sulphur
c) Producing Helium d) None
- Q.7 Which of the following is not constituent of coffee ?
a) Caffeine b) Nicotine
c) Calgon d) Lignin
- Q.8 Gypsum is chemically
a) Calcium chloride b) Potassium Sulphate
c) Sodium sulphate d) Calcium Sulphate
- Q.9 Hydrolysis of sugar is called
a) Hydration b) Inversion
c) Esterification d) None
- Q.10 The main Component of pyrex glass is
a) Zinc b) Lead
c) Boron d) None

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.11 Cement requires _____ temperature
- Q.12 What is the last stage in manufacture of sugar is _____
- Q.13 Raw material used for manufacturing of cement
- Q.14 Formula of urea is _____
- Q.15 Write the formula of ammonia
- Q.16 Raw material for manufacture of sugar is _____

Q.17 What does "K" stands in fertilizer is _____

Q.18 Formula for slaked lime is _____

Q.19 Name one raw material used in urea production

Q.20 Write formula of gypsum

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 Write methods of vegetable oil extraction. Describe any one method
- Q.22 What is the difference between the soaps and detergents ?
- Q.23 What is continuous hydrolysis and saponification process
- Q.24 Draw the flow sheet for manufacture of detergent
- Q.25 Write the all-raw material used for making pulp
- Q.26 What is mechanical pulping
- Q.27 Describe major engineering problem for sugar industry
- Q.28 Write the types of paper product
- Q.29 What is sulfitation process
- Q.30 What are uses of ammonia ? What are engineering problems while manufacturing ammonia ?
- Q.31 What is manufacturing process for ammonium Nitrate ?