

- Q.26 Write the general manufacturing steps for paper making using Fourdrinier machine.
- Q.27 Describe briefly about carbonation process.
- Q.28 State the composition of portland cement.
- Q.29 Briefly describe the manufacturing of ethanol by fermentation of molasses with neat flow sheet.
- Q.30 Explain the manufacturing of urea.
- Q.31 Discuss about the major engineering problems of urea manufacturing.
- Q.32 Explain the manufacturing of single super phosphate process.
- Q.33 Explain the manufacturing process of starch from dextrin by starch hydrolysis.
- Q.34 Explain manufacturing process of wine.
- Q.35 Discuss about the contact process.

SECTION-D

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

- Q.36 Describe the manufacturing process for production of Portland cement in detail with the help of neat process flow diagram.
- Q.37 With flow sheet, describe the process of pulping and chemical recovery by kraft process.
- Q.38 Discuss the manufacture of urea by ammonium carbonate decomposition process in detail with the help of neat process flow sheet.

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4th Sem / Chem
Subject:- Chemical Technology

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Chemical formula of sulfuric acid is
 a) HCl b) H_2SO_4
 c) H_2SO_3 d) $\text{H}_2\text{S}_2\text{O}_7$
- Q.2 Oleum is
 a) a mixture of conc. sulfuric acid and oil
 b) sulphuric acid which gives fumes of sulphur dioxide
 c) sulphuric acid saturated with sulphur trioxide
 d) a mixture of sulphuric and nitric acid.
- Q.3 Limestone is predominantly
 a) magnesium carbonate
 b) sodium carbonate
 c) calcium carbonate
 d) Potassium carbonate
- Q.4 Sulphuric acid produced by contact process is
 a) Cheaper
 b) pure and concentrated
 c) of poor quality
 d) very dilute

- Q.5 Glass is
- a crystalline solid
 - a super cooled liquid
 - a solid having a definite melting point
 - a compound of Ca Na Si and O
- Q.6 Acid pH range
- 0-7
 - 7-14
 - 0-14
 - None of these
- Q.7 Wine is obtained after alcoholic fermentation of
- rice
 - wheat
 - grapes
 - barley
- Q.8 The saponification of a fat or oil is done using _____ solution for cold process.
- KOH
 - NaOH
 - HCl
 - NaCl
- Q.9 Nitrogen content of a nitrogenous fertilizer is 35%. It could be
- Urea
 - Ammonium nitrate
 - Calcium ammonium nitrate
 - Ammonium sulphate
- Q.10 _____ is the waste liquor from the kraft pulping process after pulping is completed.
- Black liquor
 - White liquor
 - Red liquor
 - Green liquor

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SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Chemical formula of urea is _____
- Q.12 What is range of alkali?
- Q.13 Hydrogenation is the conversion of unsaturated acid groups into the saturated one by a catalyst _____.
- Q.14 In the manufacture of urea, the intermediate chemical formed is _____.
- Q.15 Sucrose content in canesugar may be around _____.
- Q.16 Vegetable ghee is manufactured by _____
- Q.17 Fourdrinier machine is used in the manufacture of _____ (sugar / paper)
- Q.18 Washing soda is chemically represent _____.
- Q.19 What is catalyst used in manufacture of sulphuric acid by contact process?
- Q.20 The crushed grapes are known as _____.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Draw the equipments layout for reactors.
- Q.22 Draw the block diagram of a petroleum refinery.
- Q.23 What is difference between mechanical and solvent extraction of oil.
- Q.24 Discuss about different types of additives and their role in soap and detergents.
- Q.25 Discuss the comparison between sulfate and sulfite pulping process.

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