

- Q.29 Explain granulation of fertilizer.
- Q.30 Discuss about chemical recovery by Kraft process.
- Q.31 Describe about continuous hydrolysis.
- Q.32 Write the properties and uses of ammonium phosphate.
- Q.33 Draw the flow sheet of contact process for the manufacturing of sulfuric acid.
- Q.34 Describe briefly about carbonation process.
- Q.35 Discuss any two of the following
 (i) Mechanical Pulping (ii) Chemical Pulping

SECTION-D

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

- Q.36 Define paper. Explain the manufacturing step of paper making using fourdrinier machine with diagram.
- Q.37 Describe about method of extracting vegetable oil by solvent extraction with the help of flow sheet.
- Q.38 With the help of neat flow sheet explain the manufacturing process of urea and discuss about the major engineering problems associated with the process.

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Branch : Chem.
Subject : Chemical Technology

Time : 3 Hrs.

M.M. : 100

SECTION-A

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

- Q.1 The catalyst used for manufacturing of sulfuric acid by contact process is
 a) Iron b) Nickel
 c) Vanadium Pentoxide d) Aluminum Oxide
- Q.2 The percentage of Oxygen in atmosphere is about
 a) 21 b) 78
 c) Less than 1 d) 100
- Q.3 The main raw material for the production of soap is
 a) Tallow
 b) Vegetable oil and caustic soda
 c) Soda Ash
 d) Tallow and Soda ash
- Q.4 The state with largest production of sugarcane in India is
 a) Bihar b) Uttar Pradesh
 c) Tamil Nadu d) None of these

- Q.5 The chemical formula of sucrose is
 a) $C_6H_{12}O_6$ b) $C_6H_{10}O_5$
 c) $C_5H_{12}O_5$ d) $C_{12}H_{22}O_{11}$
- Q.6 Bagasse fibre contain
 a) Cellulose b) Lignin
 c) Pentogens d) All of the above
- Q.7 The factor adversely affecting the fermentation process is
 a) Low concentration b) High concentration
 c) Presence of Air d) None of these
- Q.8 Molasses is a byproduct of
 a) Sugarcane b) Cement
 c) Fertilizer d) Soap
- Q.9 In NPK K stand for
 a) Potassium b) Calcium
 c) Nickel d) Kraft
- Q.10 The detergent is
 a) A Soap b) Used as a catalyst
 c) Used as water softeners d) A cleansing agent

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Draw the symbol used for continuous fractionator.

- Q.12 Define detergent.
- Q.13 Write the formula for ammonium nitrate.
- Q.14 Write two uses of starch.
- Q.15 Name two byproduct of sugar industry.
- Q.16 Define Portland cement.
- Q.17 Write the formula of urea.
- Q.18 Define solvent extraction.
- Q.19 What do you understand by fertilizer?
- Q.20 Define pulp.

SECTION-C

Note: Short answer type Questions. Attempt any twelve questions out of fifteen Questions. (12x5=60)

- Q.21 Discuss the piping and instrumentation diagram in brief.
- Q.22 Explain the different types of paper products.
- Q.23 Write the properties and uses of ammonia.
- Q.24 Describe the major engineering problem associated with production of cement.
- Q.25 Draw the flow sheet for manufacturing of ethanol by fermentation of molasses.
- Q.26 Write the manufacturing process of triple super phosphate.
- Q.27 Explain the dry process of Portland cement manufacturing.
- Q.28 Write Comparison between the sulfate and sulfite pulping process.