

Q.21 Draw the schematic representation for centrifugal pump and reciprocating pump used in process flow sheet?

Q.22 Explain the process for manufacture of urea in brief.

SECTION-D

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

Q.23 Discuss the continuous hydrolysis and saponification process for production of soap in detail with the help of neat process flow sheet.

Q.24 Explain the process used for manufacturing of portland cement along with major engineering problems in detail.

Q.25 Describe manufacturing of sulphuric acid by contact process in detail with the help of neat process flow sheet.

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3rd Sem. / Chemical

Subject : Chemical Technology

Time : 3 Hrs.

M.M. : 60

SECTION-A

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

Q.1 Esterification reaction produces

- a) detergent b) vanaspati
- c) soap d) mercaptans

Q.2 Hydrogenation of the oil is done to

- a) remove double bond
- b) raise its melting point
- c) improve its resistance to oxidation
- d) all of these

Q.3 30% oleum means that

- a) 30 kg SO₃ and 70 kg H₂SO₄
- b) 30 kg H₂SO₄ and 70 kg SO₃
- c) 30 kg SO₂ and 70 kg H₂SO₄
- d) 30 kg H₂SO₄ and 70 kg SO₂

- Q.4 Which component of fertilizer is used in stimulates early growth purpose?
- a) Nitrogen b) Phosphorus
c) Oxygen d) Potassium
- Q.5 Fourdrinier machine is used in the manufacture of?
- a) soap b) detergent
c) paper d) leather
- Q.6 Which type of cement is manufactured by fusing limestone and bauxite?
- a) Hydraulic lime
b) portland
c) magnesium oxychloride
d) high alumina

SECTION-B

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

- Q.7 Write the name of any one of the equipments used in chemical process industries for transportation of fluids.
- Q.8 Write full form of NPK.
- Q.9 Write the name of a product produced by fermentation process.

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- Q.10 What is the chemical formula for urea?
- Q.11 Write the name of a method used in chemical process industries for extraction of oil from seeds.
- Q.12 What is trade name for sulfate pulp?

SECTION-C

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

- Q.13 Describe the engineering problems associated with production of sugar in brief.
- Q.14 What are the properties and uses of ammonium nitrate?
- Q.15 Explain the different methods used for extracting oils from seeds in brief.
- Q.16 What is difference mechanical pulping and chemical pulping?
- Q.17 Discuss the different raw materials used in the manufacturing of pulp brief.
- Q.18 Discuss the piping and instrumentation diagram in brief.
- Q.19 Explain the fermentation process in brief.
- Q.20 Describe the function of different additives used in the manufacture of detergents in brief.

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