

SECTION-D

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

Q.23 What is fermentation? Describe process for production of ethanol by fermentation in detail?

Q.24 Discuss the method of manufacture of sugar from sugar cane in detail with the help of neat process flow sheet?

Q.25 Describe the process for manufacture of urea in detail with the help of neat process flow sheet?

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**3rd Sem / Branch : Chemical
Sub.: Chemical Technology**

Time : 3Hrs.

M.M. : 60

SECTION-A

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

Q.1 Sugar content of Sugarcane on weight percent basis is about?

- a) 1 to 5%
- b) 5 to 10%
- c) 10 to 15%
- d) 15 to 20%

Q.2 Basicity of sulphuric acid is ?

- a) Monobasic
- b) dibasic
- c) Tribasic
- d) None of these

Q.3 Solvent used for extraction of oil is?

- a) Hexane
- b) Methyl ethyl ketone
- c) Furfural
- d) None of these

Q.4 How liquid NH₃ fertilizer can be produced by?

- a) Solvay process
- b) NH₃ and HCl reaction
- c) Fauster process
- d) Gypsum process

Q.5 Digestion of wood based materials in the manufacture of pulp is done to?

- Remove lignin
- Produce long fibres
- Prevent deterioration on storage
- None of these

Q.6 Which unit operation mentioned below is not involved in cement rock beneficiation?

a) Grinding	b) Flotation
c) Compression	d) Thickening

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. $(6 \times 1 = 6)$

Q.7 What is the name of substance which promote better surface tension lowering than soap?

Q.8 Write full form of ABS which is acronym for a class of compounds used in the manufacture of detergents?

Q.9 What is colour of the pulp. Obtained from the sulfate pulping process?

Q.10 Write the name of raw material used for manufacture of ethanol?

Q.11 Write the name of a raw material used for manufacture of crystalline white sugar?

Q.12 Define the fertilizer?

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. $(8 \times 4 = 32)$

Q.13 Discuss the different types of paper products in brief?

Q.14 What is difference between soap and detergent?

Q.15 Draw the schematic representation for rotary filter and filter press used in the process flow sheet?

Q.16 Discuss the various raw materials used in the manufacture of cement brief?

Q.17 Write the properties and uses of ammonia?

Q.18 Discuss the solvent extraction process for extraction of oil from seeds in brief?

Q.19 What is carbonation process? Why it is used in sugar industry?

Q.20 Discuss utility line diagram in brief?

Q.21 Explain the contact process for manufacturing sulphuric acid in brief?

Q.22 What is NPK value? Discuss its significance?