

## **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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220533

**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 NH<sub>3</sub> fertilizer can be produced by?
- a) Solvay process
  - b) NH<sub>3</sub> 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?