

- Q.30 Explain the different methods used for extracting oil from seed in brief.

Q.31 Draw various symbols used for size reduction equipment.

Q.32 Write a short on NPK fertilizer.

Q.33 Explain the manufacturing process of starch from maize.

Q.34 Write a note on manufacturing of detergent.

Q.35 Discuss any one of the following.

  - a) Super phosphate
  - b) Granulation of fertilizer

## **SECTION-D**

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

- Q.36 Describe the manufacturing of sugar from sugarcane with the help of flow sheet.

Q.37 With the help of flow sheet describe the continuous process for manufacturing of fatty acids. Soap and glycerin.

Q.38 Describe the manufacturing process of Portland cement and also explain the major engineering problems associated with this process.

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# **4th Sem / Branch : Chemical Engineering**

## **Sub.: Chemical Technology**

Time : 3Hrs. M.M. : 100

M.M. : 100

## **SECTION-A**

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

- Q.1 Sulphuric acid produced by contact process is  
a) Cheaper b) Pure & concentrated  
c) Of poor quality d) Very dilute

Q.2 High purity oxygen is used for  
a) Welding b) Cutting of metals  
c) Medical purpose d) All of the above

Q.3 Oil and fats merely differs in  
a) Composition b) Density  
c) Physical state d) Chemical Properties

Q.4 Raw juice extracted from sugarcane contains  
a) 75 to 80% sucrose b) 7.5 to 8.0% sucrose  
c) 15 to 20% sucrose d) 50 to 60% sucrose

Q.5 The state which has the largest sugar mills in India is  
a) Bihar b) Uttar Pradesh  
c) Tamil Nadu d) None of these

Q.6 The percentage of Nitrogen in atmosphere is about  
a) 78 b) 21  
c) Less than 1 d) 100

- Q.7 NPK stands for  
a) Normal Phosphorous Potassium  
b) Nitrogen Phosphorous Potassium  
c) Normal Physical Potassium  
d) Nitrogen Phosphorous calcium

- Q.8 The detergent is  
a) A soap  
b) Used as a catalyst  
c) Used as water softeners  
d) A cleansing agent

- Q.9 Formation of soap involves  
a) Hydrolysis            b) Esterification  
c) Hydrogenation        d) None of the above
- Q.10 High alumina cement is manufactured by fusing  
a) Limestone and slaked lime  
b) Limestone and quick lime  
c) Limestone and bauxite  
d) Limestone and sand

### SECTION-B

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

- Q.11 Write the chemical formula for sucrose.  
Q.12 Name any two types of flow sheets.  
Q.13 Draw the symbol for filter press.

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- Q.14 Give the name of solvent used for vegetable oil extraction method.  
Q.15 Write any two uses of bagasse.  
Q.16 Define soap.  
Q.17 Name the raw materials used production of a ammonia.  
Q.18 Urea is a \_\_\_\_\_ fertilizer.  
Q.19 Define pulp.  
Q.20 Write four uses of paper.

### SECTION-C

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

- Q.21 Write about different types of additives and their role in soap and detergent.  
Q.22 Explain the major engineering problems associated with the manufacturing of urea.  
Q.23 Compare the sulfate and sulfite pulping process.  
Q.24 Explain the manufacturing process of beer.  
Q.25 Discuss the classification of cement.  
Q.26 Explain the manufacturing process of ammonium nitrate.  
Q.27 Write major engineering problems while sulfuric acid manufacturing.  
Q.28 Draw the flow sheet of paper making process.  
Q.29 Write the properties and uses of sulfuric acid.

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