

xv) Discuss Agro based industries. Name any four Agro based industries.

### SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain the flowsheet of production of glycering as a by product from soap & fatty acid. Also write major engg problems encountered during the process.
- Q.4 Define vegetable oils. Write its chemical composition and properties. Explain solvent extraction method of extracting vegetable oils.
- Q.5 Explain starch production from Maize with a detailed flow sheet. Also discuss the major engg. problems encountered during the process.
- Q.6 Describe with the help of flowsheet general method of paper production by fourdrinier machine. Also write down uses of paper.
- Q.7 Describe the production of sugar with the help of detailed flowsheet, including all chemical reactions and major engg. problems.

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**6th Sem. / Chemical**

**Subject : Agro Based Industries**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- Write down chemical formula of Sugar (sucrose).
  - Write down the reaction for hydrolysis of oils.
  - Define pulp.
  - Write down raw materials for production of sugar.
  - Define food additives.
  - Define fibrous raw-materials for paper production.
  - Name by products of sugar industries.
  - Write down the name of solvent used in solvent extraction method.

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- i) State fluidized bed.
- j) Name the Catalytic enzymes which are used in fermentation process to produce ethyl alcohol.
- k) Write down uses of paper.
- l) Define essential oil.
- m) Name the catalyst used in hydrogenation of oil.
- n) Write down uses of non-edible oils.
- o) Write down industrial uses of soap.
- p) Define mother liquor.
- q) Define Hydrophobic.
- r) Write down chemical formula of glycerine.

### SECTION-B

**Note:** Short answer type questions. Attempt any ten parts  
10x4=40

- Q.2
- i) Define essential oil. Describe general method of production of essential oil and its uses.
  - ii) Explain major engg problems encountered during production of dextrine.
  - iii) Discuss choice of Refrigerants in details.

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- iv) Write down the chemical reactions involved in the process of manufacturing of ethyl alcohol by fermentation.
- v) Describe general characteristic of fermentation process.
- vi) Describe industrial uses and properties of glycerin.
- vii) Explain food storage and transport.
- viii) What is hydrogenation of oils? Write down the chemical reactions involved in hydrogenation of oils.
- ix) Discuss constituents of soap of its cleansing action.
- x) Define paper. Explain non-fibrous raw materials for paper production.
- xi) Explain food processing, freeze drying in details.
- xii) Explain construction details of extractor used for Soyabean oil with neat and clean diagram.
- xiii) Explain essential and edible oil in details.
- xiv) What do you mean by starch derivatives. Explain manufacturing process by any one Starch derivatives.

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