

Technology of Oils, Fats and Surfactants - V
(Technology of Fat Splitting, Essential Oils & Other Fat Products)

P. Pages : 1

Time : Three Hours



TKN/KS/16/7924

Max. Marks : 80

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- Notes :
1. All questions carry equal marks.
 2. Answer **any five** questions.
 3. Assume suitable data wherever necessary.
 4. Diagrams and Chemical equations should be given wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.
 6. Discuss the reaction, mechanism wherever necessary.

1. a) Discuss the chemistry of fat splitting. Describe the effect of temperature, pressure, catalyst and rates of reactants in hydrolysis of fats. **6**
b) Discuss about the various plants and processer for fat splitting, giving details of any one modern process with a flow diagram. **10**
2. Write in detail about purification of fat splitting products giving details of fractional distillation and solvent crystallization giving neat flow diagram. **16**
Write about analytic of reaction product of fat splitting.
3. Give a classification of Essential oils in general. Give general methods for the production of essential oil from roots and flower's. Write in detail about important essential oils such as rose and sandalwood oil. **16**
4. Write in detail, about the various chemical constituents of essential oils with structures. Give a detailed account of analysis of essential oils. **16**
5. Write, in detail, about the natural and synthetic perfumes materials. Give in detail about important isolates and fixatives, their blending and industrial use. **16**
6. Describe the mechanism and industrial utilization of important chemical reaction of fats and fatty acids such as esterification, inter-esterification, and polymerization. **16**
7. Write detailed notes on **any three** of the following. **16**
 - i) Epoxidation of oils.
 - ii) Industrial Uses of Essential oils.
 - iii) Halogenation and Hydroxylation.
 - iv) Lemongrass and Clove oils.
8. Write short notes on **any four** of the following. **16**
 - i) Twitchell process.
 - ii) Khu's oil
 - iii) Recent advances in the field of fat splitting.
 - iv) Analysis of Fatty Acids.
 - v) Pyrolysis.
 - vi) Enzymatic Fat Splitting.
