

B.Tech. Fourth Semester (Food, Pulp & Paper, Oil & Paint & Petro Chem.) (CGS)  
**11015 : Oil & Paint Tech. - I : 4 PT 02**

P. Pages : 2

Time : Three Hours



**AU - 2635**

Max. Marks : 80

- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Diagrams and chemical equations should be given wherever necessary.
  4. Illustrate your answer necessary with the help of neat sketches.
  5. Use of pen Blue/Black ink/refill only for writing the answer book.

**SECTION - A**

1. Give an account of common name, systematic name, structure & occurrence of following. **13**
  - i) Fatty acid having one double bond.
  - ii) Fatty acid having two double bond.
  - iii) Fatty acid having three double bond.
  - iv) Fatty acid having OH group attached.

**OR**

2. Give an account of chemical structure, occurrence & importance of non glyceride components with respect to stability of oils & fats and components affecting colour of oils & fats. **13**
3. Give an account of various saturated fatty acids with respect to their common names, structure, occurrence & uses. **13**

**OR**

4. Discuss about. **13**
  - i) Unusual fatty acids.
  - ii) Physical properties of oils & fats.
5. Define acid value, saponification value & Iodine value, Describe the method of determination of Saponification value. What precautions will you take while determination? **14**

**OR**

6. Discuss about the constituents of oils & fats. Give various Phospholipids occurring in oils & fats in detail with their structure & uses. **14**

**SECTION – B**

7. Describe the method of determination of acid value in laboratory. Also state the significance of acid value determination. What precautions will you take while determination? 13

**OR**

8. Give an account of Baily's classification of oils & fats. Discuss the oleic- linoleic group with their properties & fatty acid composition. 13

9. Define the term "Rancidity" of oils & fats. Why rancidity occurs? Describe the mechanism of autoxidation. 13

**OR**

10. Give an account of natural & synthetic antioxidants with their structure. Also state synergism with examples. 13

11. State the significance of ISI. Give an account of ISI specification of following. 14

- |                      |                |
|----------------------|----------------|
| i) Oils.             | ii) Oil seeds. |
| iii) Vanaspati ghee. | iv) DOC.       |

**OR**

12. Describe atmospheric autoxidation of oils & fats. Discuss the factors affecting the atmospheric oxidation. State the mechanism of antioxidant. 14

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