

NTK/KW/15/7906

Faculty of Engineering and Technology

B.Tech. Fifth Semester (Chemical Tech.)

(C.B.S.) Examination

TECHNOLOGY OF OILS AND FATS AND

SURFACTANTS—III

(Sp. Tech.—III)

Time : Three Hours]

[Maximum Marks : 80

INSTRUCTIONS TO CANDIDATES

- (1) All questions carry equal marks.
 - (2) Answer any **FIVE** questions.
 - (3) Due credit will be given to neatness and adequate dimensions.
 - (4) Assume suitable data wherever necessary.
 - (5) Diagrams and Chemical equations should be given wherever necessary.
 - (6) Discuss the reaction, mechanism wherever necessary.
1. Write a brief note on Pre-treatments given to Oil seeds before Extraction of Oil. Explain the process with suitable diagram. Write a note on storage and sampling of Soybean Oil Seeds. 16

2. Discuss about the term rancidity in Oil and necessity of refining of Oil. Give a detailed account of degumming process with suitable example, explaining its process with proper flow chart. 16
3. Discuss the various compounds responsible for odour and flavour in Oils and Fats. Write a detailed note on any one method used for deodorization of Oils and Fats. Explain the term Wesson's Loss in refining of Oils. 16
4. Explain the term chemistry of hydrogenation with its need and importance. Describe the process of hydrogenation with neat sketch emphasizing on effect of pressure, temperature, agitation and concentration of catalyst. 16
5. Discuss in detail about winterization and interesterification of Oils used for upgradation of Oils. Highlight the methodology with suitable examples. Write a note on utilization of Oil Cakes. 16
6. Write short notes on any **two** of the following :
 - (i) Safety measures in solvent extraction plant
 - (ii) Bleaching of Oils
 - (iii) Cooking and Salad Oils
 - (iv) Edible Oil and Frying Oils and its types
 - (v) Antioxidants, role in Oil and Fat. 16

7. Give detailed brief accounts on following :
 - (i) Butter
 - (ii) Margarine
 - (iii) Shortenings. 16
8. Write short notes on any **four** of the following :
 - (i) Effluents from refining units
 - (ii) Production of Hydrogen for hydrogenation process
 - (iii) Rendering of animal Fats
 - (iv) Batch processes of mechanical extraction of Oils
 - (v) Selective Hydrogenation
 - (vi) Anderson Screw Expeller
 - (vii) Pollution control measures in refining of Oils and Fats. 16

NTK/KW/15/7906

Faculty of Engineering and Technology

B.Tech. Fifth Semester (Chemical Tech.)

(C.B.S.) Examination

**TECHNOLOGY OF OILS AND FATS AND
SURFACTANTS—III**

(Sp. Tech.—III)

Note :— Heading on MSS and Envelope are different. Press
has followed Envelope. Please check.

NTK/KW/15/7906

Faculty of Engineering and Technology

B.Tech. Fifth Semester (Chemical Tech.)

(C.B.S.) Examination

**TECHNOLOGY OF OILS AND FATS AND
SURFACTANTS—III**

(Sp. Tech.—III)

Note :— Heading on MSS and Envelope are different. Press
has followed Envelope. Please check.

NTK/KW/15/7906

Faculty of Engineering and Technology

B.Tech. Fifth Semester (Chemical Tech.)

(C.B.S.) Examination

**TECHNOLOGY OF OILS AND FATS AND
SURFACTANTS—III**

(Sp. Tech.—III)

Note :— Heading on MSS and Envelope are different. Press
has followed Envelope. Please check.

NTK/KW/15/7906

Faculty of Engineering and Technology

B.Tech. Fifth Semester (Chemical Tech.)

(C.B.S.) Examination

**TECHNOLOGY OF OILS AND FATS AND
SURFACTANTS—III**

(Sp. Tech.—III)

Note :— Heading on MSS and Envelope are different. Press
has followed Envelope. Please check.