



C20-CHOT-403

7482

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DCHOT – FOURTH SEMESTER EXAMINATION

TECHNOLOGY OF VEGETABLE OILS AND FATS—I

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Mention the sources of fatty acids.
2. Define an antioxidant and list any three examples.
3. List the physical properties of fatty acids.
4. Define stability of fatty acids.
5. List out the methods of analysis of oils, fats and fatty acids.
6. Define physical refining of vegetable oils and fats.
7. Differentiate between thin layer chromatography and gas liquid partition chromatography.
8. How are fatty acids used in bio-diesel production?
9. Mention the uses of fatty acids in food industry.
10. Define surfactant and list the types of surfactants.

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain chemical properties of fatty acids.

(OR)

(b) Mention the fatty acid compositions of (i) palm oil and (ii) sunflower oil.

12. (a) Explain the constituents imparting color and odor to fatty acids.

(OR)

(b) Mention the fatty acid compositions of (i) groundnut oil and (ii) rice bran oil.

13. (a) Explain the role of moisture content determination in the analysis of vegetable oils and fats.

(OR)

(b) Define iodine value and mention its significance in the vegetable oil industry.

14. (a) Explain a method to determine color of vegetable oils and fats.

(OR)

(b) Define acid value and explain an experimental procedure to determine acid value of vegetable oils and fats.

15. (a) Explain a technique of separation of oils, fats and fatty acids by distillation operation.

(OR)

(b) Explain a chromatographic method of separation of oils, fats and fatty acids.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Compare various methods used for synthesis of surfactants.

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