

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: IMSC AND PRE PHD  
BRANCH: FOOD TECHNOLOGY

SEMESTER : VII  
SESSION : MO/2022

SUBJECT: FT404 FATS AND OIL TECHNOLOGY

TIME: 3:00 Hours

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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|--------|---|-----|------|
| Q.1(a) | Classify unsaturated fatty acid with example.   | [2] | CO-1 |
| Q.1(b) | Describe the function of essential fatty acid.  | [3] | CO-3 |
| Q.1(c) | Explain the Glycerophospholipids and Sphingophospholipids. Define Lecithin with its role in human body  | [5] | CO-2 |
| Q.2(a) | Explaining the different drying process of dehusked coconut.  | [2] | CO-2 |
| Q.2(b) | Illustrate the solvent extraction of rice bran oil  | [3] | CO-4 |
| Q.2(c) | Describe the different process of cotton seed oil deterioration. What are the different approaches of quality improvement of cotton seed oil? | [5] | CO-3 |
| Q.3(a) | Classify the different chemical modifications used to take place in fats and oil.   | [2] | CO-4 |
| Q.3(b) | Lists the three different types of trans esterifications? Explain with example  | [3] | CO-4 |
| Q.3(c) | Illustrate the different types of fractionation processes. How nucleation takes place in two steps.   | [5] | CO-5 |
| Q.4(a) | Classify animal fat on the basis of its nature.   | [2] | CO-1 |
| Q.4(b) | Demonstrate the dry and wet rendering process of animal fat.  | [3] | CO-4 |
| Q.4(c) | Describe the animal fat extractions emphasis on neutralization and bleaching.   | [5] | CO-5 |
| Q.5(a) | List the conventional types of spoilages of fat.  | [2] | CO-1 |
| Q.5(b) | Illustrate the different method of prevention of rancidity.   | [3] |      |
| Q.5(c) | Explain the emulsification of fat and its applications. Define smoke, flash and fire point of fat.  | [5] | CO-5 |

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