

B.E (FTBE) THIRD YEAR, FIRST SEMESTER EXAMINATION 2018

FOOD PROCESS TECHNOLOGY -II

Time : Three hours

Full Marks : 100

Use a separate answerscript for each part

PART - I (50 MARKS)

Answer Q1 and Any Two from the rest

Q1. Fill in the blanks:

10 × 1 = 10

- a. Temperature of formation of trans fatty acids is
- b. Earthy odor of oils are due to.....
- c.constitute the hydrophilic core in reverse micelles in oil processing.
- d. A large number of contact stages are needed if flakes/solvent ratio is
- e.is an example of a hard oil.
- f. The final content of P in the oil should be
- g. Refining efficiency =
- h. The most important factor that governs winterization is.....
- i. Speed of rotation of Carrousel extractor is
- j. Deodorized oils have% FFA.

Q2. Distinguish between (any five):

5 × 4 = 20

- a. Counter-current multistage vs. Co-current single stage extraction of soybean oil
- b. Pervaporation vs. Membrane separation for cottonseed
- c. High trans oil vs. Low-trans plastic fat
- d. Pre-bleaching vs Post-bleaching
- e. IPA extraction vs. *n*- Hexane extraction for Cottonseed oil
- f. Yield of oil and cake from groundnuts (48% oil and 5% moisture) pressed to leave 8% oil in cake (7% moisture), with and without moisture loss

Q3. Explain the working principle of (any five)

5× 4= 20

- a. De-Smet extractor
- b. Oilseed Cooker
- c. Heat Exchanger in manufacture of shortening
- d. Expeller Press
- e. Disc Huller
- f. Picker

Q4. Write short notes on (any five):

5 × 4 = 20

- a. Lecithin recovery from soybean
- b. Disadvantages of chemical refining
- c. Differences in oil contents in seeds before and after hulling
- d. Acid-water degumming
- e. 1,3-random-2-random theory
- f. Process that produces new fats without altering its degree of saturation

BACHELOR OF ENGINEERING (F.T.B.E) EXAMINATION, 2018

(3rd year, 1st Semester)

Food Process Technology-II

Time: 3 hours

FM: 100

Part: II (50 Marks)

(Answer question no. 1 and any two of other questions: 10+20x2=50)

1. a) Discuss the working principle of color sorter of rice?
 b) How does dough molding machine work?
 c) Discuss a proper grain storage system in rice mill which will help to maintain the moisture content of grain.
 d) Discuss the working principle of polisher.

2.5x4=10

2. Using Henderson equation find out the value of c and n from following data obtained from thin layer paddy drying studies

RH= 40% t= 50⁰ C, M_e = 11.5%RH= 60% t=50⁰ C M_e = 14.5 %

Discuss the methods of parboiling developed by CFTRI and Jadavpur University.

10+10=20

3. Discuss wheat wet milling process. What is the difference between huller and Sheller rice milling machine discuss with working principle?

10+10=20

4. What types of flour suitable for bread making? What are the functions of the different ingredients used for bread making? How can you increase the uniformity of crumb structure of bread and protect from the mould growth in bread?

5+10+5=20