

B. FTBE 3<sup>RD</sup> YEAR 1<sup>ST</sup> SEM SUPPLEMENTARY EXAM, 2017

## Food Process Technology-II

Time: 3 hours

FM: 100

Part: I (50 MARKS)

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

1. a) What is hysteresis? How does it affect the rate of drying?  
b) Discuss working principle of dough ball making machine (any one)?  
c) What do you mean by angel of repose?  
d) Discuss the working principle of paddy separator.

2.5x4=10

2. Determine the values of c & n from the Henderson equation from following data obtained from thin layer paddy drying studies

RH= 29% t= 60<sup>0</sup> C, M<sub>e</sub> = 11.5%RH= 50% t=60<sup>0</sup> C M<sub>e</sub> = 16.5 %

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

10+10=20

3. Discuss the methods of wet milling process of wheat. What is the difference between hullar and sheller rice milling machine discuss with working principle?

10+10=20

4. What are the instrument used for characterization of dough discuss the working principle of any one of them. What are the functions of the different ingredients used for bread making?

10+10=20

B.E (FTBE) THIRD YEAR, 1<sup>ST</sup> SEMESTER SUPPLEMENTARY EXAM-2017

FOOD PROCESSING TECHNOLOGY -II

PART - II (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. Pre-bleaching removes ..... color in oils.
- c. RBO contains.....as antioxidant.
- d. Cooking temperature of .....is recommended for soybeans.
- e. ....constitute the hydrophilic core in reverse micelles in oil processing.
- f. A large number of contact stages are needed if flakes/solvent ratio is .....
- g. ....is an example of a hard oil.
- h. The final content of P in the oil should be .....
- i. Refining efficiency =
- j. An example of fat that mimics cocoa butter is.....

**Q2. Distinguish between (any four):**

**4 × 5 = 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. Bar huller vs. Disc Huller
- e. Pre-bleaching vs Post-bleaching

**Q3. Enumerate the objectives of (any five):**

**5 × 4 = 20**

- a. Rotary locks in de-Smet extractors
- b. Citric acid in acid-water degumming
- c. Analysis of FFA content of oil prior to refining
- d. Flaking
- e. Deodorization

f. Crude oil conditioning

**Q4. Write short notes on (any five):**

**5 × 4 = 20**

- a. Lecithin recovery from soybean
- b. Dutch process of manufacture of cocoa powder
- c. Disadvantages of chemical refining
- d. Operations in manufacture of 'dairy milk chocolate' that lend it its texture
- e. CBS fats
- f. Expeller press