

Total number of printed pages-3

53 (FPT 812) CADH

2017

**CONCENTRATION AND
DEHYDRATION OF FOOD**

Paper : FPT 812

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

Answer **any five** questions from **seven**.

1. (i) Describe dehydration mechanism of food with required plot.
- (ii) Describe the following :
Dry Bulb Temperature
Wet Bulb Temperature
Relative Humidity
Specific Humidity
Water Activity 5+15=20

Contd.

2. Write about stability and quality aspects of food during/after drying operation like microbial spoilage, enzymatic and non-enzymatic reaction, lipid oxidation, nutrient loss, aroma and flavour loss, structural aspects of dried food. 20
3. (i) Briefly write controlling factors for drying.
- (ii) Discuss different air drying methods like cabinet drying, drum drying. 10+10=20
4. (i) Briefly describe spray drying method with diagram of spray dryer.
- (ii) Write overall thermal efficiency and evaporative efficiency of spray dryer.
- (iii) What is the principle of vacuum drying? Why it is useful? 10+4+6=20
5. (i) Write principle of freeze drying with triple point diagram of water.
- (ii) Write about fluidized bed dryer.
- (iii) Briefly discuss about continuous dryer like tunnel dryer and conveyor belt dryer. 7+6+7=20

6. (i) Write application of spray drying in food industry.

(ii) Briefly write about membrane concentration and its application.

10+10=20

7. (i) Write short note on osmotic dehydration and Hurdle technology.

(ii) What is freeze concentration ?

15+5=20
