

Total number of printed pages = 3

19/6th Sem/DFET 601

2022

FOOD ENGINEERING OPERATIONS - II

Full Marks – 100

Time – Three hours

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

Answer any *five* questions.

1. (a) What do you mean by drying? 5
- (b) Discuss the different objectives of drying. 5
- (c) With neat labelled diagram, write the mechanism of drying. 10
2. (a) How evaporation is different from distillation and dehydration? 10
- (b) With neat labelled diagram discuss single effect evaporator. 10

[Turn over

3. (a) How de-humidification of air is done ?

10

(b) Describe typical humidification equipment with neat labelled diagram. 10

4. (a) If the moisture content of the freshly harvested paddy is 23% WB and it is dried to 15% WB, calculate the loss of moisture.

10

(b) Define moisture content. Discuss the different determination methods of moisture content determination. 3+7=10

5. Differentiate the following any *four* : $5 \times 4 = 20$

(i) Wet Basis and Dry basis of moisture content

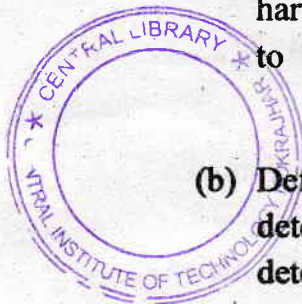
(ii) Spray dryer and Drum dryer

(iii) Constant rate period and Falling rate period

(iv) Falling film evaporator and Rising film evaporator

(v) Dry bulb temperature and Wet bulb temperature

(vi) Sensible heating and Sensible cooling.



6. Write short notes on any *four* : $5 \times 4 = 20$

- (i) Dew Point Temperature
- (ii) Critical Moisture Content
- (iii) Percentage Humidity
- (iv) Relative Humidity
- (v) Drying Curve
- (vi) Cabinet Dryer.



7. With neat labelled diagram discuss Spray Dryer.

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