# 2018

**B.Tech Even Semester (CBCS) Exam., May—2018**

## AGRICULTURAL ENGINEERING

**( 8th Semester )**

Course No. : AE–801 (C)

**( Fruit and Vegetable Processing )**

*Full Marks* : 75
*Pass Marks* : 30

*Time* : 3 hours

*Note* : 1. Answer **one** question from each Unit.
2. Begin each answer in a new page.
3. Answer parts of a question at a place.
4. Assume reasonable data wherever required.
5. The figures in the margin indicate full marks for the questions.

UNIT—1

**1.** *(a)* Explain the purpose of primary, secondary and tertiary processing of food. 7½

*(b)* Discuss the working principle of magnetic separator with a neat figure. 7½





**2.** *(a)* Classify unit operations of the food processing industry by principal group. 7½

*(b)* Discuss the working principle of indented cylinder separator with a neat figure. 7½

UNIT—2

**3.** *(a)* Discuss the processing of coffee. 7½

*(b)* Explain the methods of end point judgement during processing of jam and jelly. 7½

**4.** *(a)* Explain in brief the various methods of quick freezing of food materials. 10

*(b)* Describe the principle of preservation of fruit and vegetable by pickling process. 5

UNIT—3

**5.** *(a)* Design a bag storage structure for storing 250 tonnes of paddy with a stack of 10 bags in length and 10 bags in width. Each bag is 85 cm long, 60 cm wide and 30 cm high can hold 75 kg of paddy. Give the complete floor plan of the structure. Assume other reasonable data wherever necessary, but state them clearly. 10

*(b)* What are the factors to be considered during selection of the location of warehouse? 5

**6.** What are the various by-products generated in rice mill during processing of paddy-rice? Discuss in brief the utilization of paddy-rice by-products. 15

UNIT—4

**7.** *(a)* Describe in brief the stages of seed processing. 10

*(b)* Differentiate between direct and indirect damage of food by insects during storage. 5

**8.** Describe the post-harvest control of fungi in storage. 15

UNIT—5

**9.** *(a)* Discuss the various treatments for enhancing the shelf-life of fruit and vegetable. 7½

*(b)* Enlist the different food packaging materials. Describe the basic requirements of packaging materials. 7½

**10.** *(a)* Which factors are to be considered for the objective assessment of packaging materials? Explain. 7½

*(b)* Discuss the various components of a package. 7½

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