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53 (FPT 401) FPTC-I

2018

**FOOD PRODUCT TECHNOLOGY-I
(FRUITS AND VEGETABLES)**

Paper : FPT 401

Full Marks : 100

Time : Three hours

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

Answer any five questions.

1. (a) Elaborate the preliminary operations/
treatments prior to packaging of fruits
and vegetables. 10
- (b) Explain about maturity index with
suitable examples. 10
2. (a) Classify fruits and vegetables based on
their perishability. 4

Contd.

- (b) Explain about the microbiological agents involved in the deterioration/spoilage of fruits and vegetables. 10
- (c) Define water activity and list the equipment used to measure the water activity. 2+4=6
3. (a) Explain about the machine systems used in MAP and discuss about the types of plastic films used in MAP. 5+5=10
- (b) Match the following : 3×1=3
- | MAP Type | - Gas Mixture |
|---------------------------------|----------------------------------|
| (i) Inert blanketing | - CO_2/N_2 (or) $D_2/CO_2/N_2$ |
| (ii) Semi-reactive blanketing | - CO_2 (or) CO_2/O_2 |
| (iii) Fully-reactive blanketing | - N_2 . |
- (c) Summarize the beneficial and detrimental effects of CAP. 7
4. (a) Mention the technological flow chart for the Jam making process and explain it. 12

- (b) Provide the technological flow chart for the processing of Jelly and explain about the end point judgement in Jelly making. 5+3=8
5. Give process flow chart for the following products : 4×5=20
- Marmalade
 - Preserve
 - Candy
 - Tomato paste.
6. (a) Explain the manufacturing process of cordial with suitable flow chart. 10
- (b) How fruit juice concentrates/purees are made ? Explain it with proper flow chart. 10
7. (a) Explain the steps in the processing of cashew nuts. 10
- (b) Detail the processing steps in the production of different teas. 10