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END SEMESTER EXAMINATION, NOVEMBER-2018

Semester : 5th

Subject Code : FPT-503

FOOD PRODUCT TECHNOLOGY-I

Full Marks - 70

Time - Three hours

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

Instructions :

1. All questions of PART - A are compulsory.
2. Answer any five questions from PART - B.

PART - A

Marks - 25

1. Fill in the blanks :

1 × 10 = 10

- (a) The moisture content in white rice is about _____ %.

- (b) The speed of faster rotating roll in a paddy dehusker is _____ m/s.

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- (c) The soaking step in traditional parboiling step runs for about _____ hours.
 - (d) The protein content in wheat is about _____ %.
 - (e) During rehydration in pulses processing, soaking increases the moisture content to _____ %.
 - (f) The full form of FPO is _____.
 - (g) The product loss in flame peeling is about _____ %.
 - (h) The substrate for fermentation to take place in foods is _____.
 - (i) The temperature used in Parching and Puffing is _____.
 - (j) Typically there are _____ number of stages in the drying curve of foods.
2. Write true or false : 1×10=10
- (a) The kind of drying where solids remain suspended in the air is known as Fluidized bed drying.
 - (b) Quick freezing employs temperature between -5 to -10° C.
 - (c) Blanching is not a type of thermal treatment.

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(2)

- (d) Canning is a form of sterilization process.
- (e) FSSAI was enacted in the year 2008.
- (f) Malt are germinated oat grains.
- (g) CAP is costlier than MAP.
- (h) Carborundum rollers are used in abrasion peeling.
- (i) Pasteurization leads to inactivation of enzymes.
- (j) Viscosity of foods is effected by thermal treatment.

3. Choose the correct answer :

1×5=5

- (a) The velocity of air used in tunnel drier is
 - (i) 2.8 – 4 m/s
 - (ii) 2.6 – 5 m/s
 - (iii) 2.5 – 6 m/siv
 - (iv) 2 – 6 m/s
- (b) Immersion in a refrigerant is a type of
 - (i) Quick freezing
 - (ii) Direct freezing
 - (iii) Indirect freezing
 - (iv) Air freezing

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(c) Lyophilization is a type of

- (i) Freeze drying
- (ii) Spray drying
- (iii) Vacuum drying
- (iv) Fluidized bed drying

(d) What kind of spoilage in canned foods occur mainly in acidic foods ?

- (i) Toxic spoilage
- (ii) Metallic salts
- (iii) Hydrogen swells
- (iv) Flat sour

(e) The step which is not a part of making is

- (i) Drying
- (ii) Germination
- (iii) Blanching
- (iv) Steeping

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(4)

110(B)

PART - B

Marks - 45

4. (a) Explain Hydrogenated Fats and Shortening. 3

(b) Explain any two methods of Drying of foods. 3

(c) Explain any two types of spoilage in canned foods. 3

5. (a) Explain any two methods of cooling techniques for agricultural produce. 3

(b) Explain any two methods of peeling of fruits and vegetables. 3

(c) Explain the different types of freezing techniques of foods. 3

6. (a) Explain the CFTRI process of parboiling. 3

(b) Write a note on FPO. 3

(c) Explain any three methods of processing of pulses. 3

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7. (a) Explain any two types of cleaning for fruits and vegetables. 3
- (b) Write a short note on CAP and MAP. 3
- (c) Explain canning in foods. 3
8. (a) Explain the major points in the Drying Curve with diagram. 4½
- (b) Explain blanching and its types. 4½
9. (a) Describe the steps of maling. 4½
- (b) Explain how temperature and humidity effect the storage of fresh fruits and vegetables. 4½
10. Explain the effects of thermal treatment on the quality of food products. 9
11. Write down any ten utilization of wastes. 9
12. Explain the complete process of Rice Milling. 9