

Total No. of printed pages = 6

END SEMESTER EXAMINATION-2019

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. Questions on 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 starch content in white rice is about _____%.

(b) The fat content in brown rice is about _____%.

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- (c) The slower rotating roll in a rubber roll dehusker should have a surface speed of around _____ m/s.
 - (d) The steel screen wire mesh present in a cone polisher is called _____.
 - (e) The three stages of parboiling are soaking, _____ and drying.
 - (f) Parching and puffing are two types of _____ processing.
 - (g) The period of _____ in Maling continues for around 5 days.
 - (h) Cold storage of fruits and vegetables use a temperature of about _____ degree Fahrenheit.
 - (i) The full form of CAP is _____.
 - (j) Flash steam peeling uses high pressure stream of about _____.
2. Write true or false : 1×10=10
- (i) The drying curve has 3 number of stages.
 - (ii) Margarine is a substitute of butter.
 - (iii) There is no difference between grading and sorting.



- (iv) FPO was established in 1960.
- (v) Using Brine solution for foods is an example of direct freezing.
- (vi) Soaking of pulses grain leads to loss of water soluble nutrients.
- (vii) Aspiration cleaning uses aerodynamic properties of materials.
- (viii) The usual temperature of blanching is between 100 to 110.
- (ix) Decorication is the removal of outer coating / layer of seeds / pulses.
- (x) The HTST pasteurization uses temperature of 72°C for 15 seconds.

Choose the correct answers : 1×5=5

- (i) The velocity of air used in tunnel drier is

(a) 2.8-4 m/s	(b) 2.6-5 m/s
(c) 2.5-6 m/s	(d) 2-6 m/s
- (ii) The objective of pasteurisation is
 - (a) to destroy pathogens
 - (b) to reduce bacterial count
 - (c) to extend shelf life
 - (d) All of the above

(iii) The primary objective of blanching is

- (a) to destroy microbes
- (b) to brighten the food
- (c) to inactivate the enzymes
- (d) to soften the food

(iv) The amount of moisture lost from foods during vacuum cooling is about

- (a) 1 – 2%
- (b) 2 – 3 %
- (c) 3 – 4%
- (d) 4 – 5%

(v) In CFTRI method of parboiling paddy is soaked for around

- (a) 3 – 3.5 hours
- (b) 2 – 2.5 hours
- (c) 1 – 1.5 hours
- (d) 4 – 4.5 hours.

PART – B

Marks – 45

4. (a) Write a note on CAP and MAP. 3

(b) Write a note on FFO. 3

(c) Explain the types of freezing in foods. 3

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5. (a) Explain how the temperature affects the storage of fresh fruits and vegetables. 3

(b) Explain how humidity affects the storage of fresh fruits and vegetables. 3

(c) Explain any three methods of cooling of agricultural products. 3

6. (a) Explain types of blanching carried out in foods. 3

(b) Describe the CFTRI method of parboiling or, pressure parboiling. 3

(c) Write a note on hydrogenated fat and shortening in foods. 3

(a) Explain any three advantages and three disadvantages of parboiling. 3

(b) Describe the traditional method of parboiling. 3

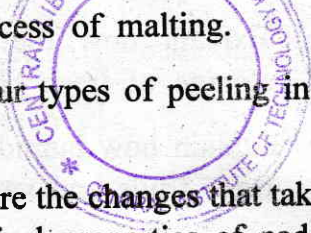
(c) Describe pasteurization and its types. 3

8. (a) Explain the drying curve with a proper diagram. 4½

(b) Explain four types of dry method of cleaning foods. 4½

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9. (a) Explain the process of malting. 4½
(b) Describe any four types of peeling in foods. 4½
10. (a) Describe what are the changes that take place in the biochemical properties of paddy/rice as a result of parboiling. 4½
(b) Describe the various types of spoilage in canned foods. 4½
11. Describe the complete process of rice milling. 9
12. Describe the dry or wet milling of pulses processing. 9
13. Describe the process of wheat milling. 9
14. Write any nine examples of utilization of wastes produced in food industries. 9
15. Describe the effects of thermal treatment on the quality of fruits and vegetable products. 9