



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg) 2017 Admission
III Semester Final Examination-January 2019

Fdqu.2104

Biochemistry of Processing and Preservation(1+1)

Marks:50
Time: 2 hours

I Fill in the blanks: (10x1=10)

- 1 _____ is the most common effective method of food processing
- 2 The most important biochemical reaction responsible for the development of specific taste and aroma is _____
- 3 During _____ the viscosity of the starch mixture increases, followed by imbibition of water.
- 4 Leaching of _____ is responsible for sticky nature of starch gel.

Choose the correct answer

- 5 Degradation products of starch
a. Dextrin b. Fructan c. Galactose d. Sucrose
- 6 Natural preservative is
a. Vitamin E b. Vitamin B c. Cellulose d. Salt

State True or False

- 7 Organic acid found in the apple is mevalonic acid.
- 8 Parboiling increases the fat content in rice.
- 9 Amylases hydrolyze $\alpha 1 \rightarrow 4$ glycosidic linkage in starch.
- 10 Fructose is sweeter than sucrose.

II Write Short notes on ANY FIVE of the following (5x2=10)

- 1 Changes associated with storage of fruits and vegetables including cold storage and freezing
- 2 Preservation of food by salt
- 3 Browning reaction in food
- 4 Rancidity
- 5 Parboiling
- 6 Food irradiation
- 7 Gelatinization

III Answer ANY FIVE of the following (5x4=20)

- 1 Differentiate browning and mailard reaction.
- 2 How the nutrient loss can be minimized during cooking process.
- 3 List down the major organic acids present in fruits and write their role.
- 4 Maturation of fruits and vegetables.
- 5 Nutritional quality factors.
- 6 Food stabilizers
- 7 Principle of spectrophotometry and its applications in food industries.

IV Answer ANY ONE of the following (1x10=10)

- 1 Biochemical changes happening during cooking in food.
2. Various factors affecting the quality of foods
