



KERALA AGRICULTURAL UNIVERSITY

B.Tech.(Food Engg.) 2016 Admission

III Semester Final Examination-January-2018

Fdqu.2104

Biochemistry of Processing and Preservation (1+1) Marks: 50

Time: 2 hours

(10x1=10)

I Fill in the blanks

- 1 During cooking, starch undergo-----by absorbing water and swelling.
- 2 Maillard reaction produces edible pigment molecules called-----
- 3 Refrigeration reduces the activity of microorganisms and -----
- 4 Dehydration is based on the principle of removal of -----
- 5 Electrophoresis was first developed by-----

State True or False

- 6 Mild cooking causes denaturation and coagulation with increased solubility of proteins.
- 7 Sodium benzoate is a chemical preservative.
- 8 Addition of spices to pickles allow the microorganisms to grow quickly.
- 9 Canning of food leads to loss of Vitamin C.
- 10 In chromatography mobile phase may be liquid or gas.

II Write Short notes on any FIVE of the following

(5x2=10)

- 1 What is caramelization?
- 2 Define retrogradation.
- 3 How are food items classified based on their shelf life?
- 4 How does salt act as a preservative?
- 5 Why do vegetables turn brown during storage?
- 6 What is the principle of electrophoresis?
- 7 What is Beer-Lambert's law?

III Answer any FIVE of the following.

(5x4=20)

- 1 How does cooking affect the nutrients. What are the preventive measures during cooking?
- 2 List out the different ways of delaying microbial action in food?
- 3 Define the terms preservation and shelf life.
- 4 Explain the different methods of preserving food at low temperatures.
- 5 Describe the process of malting
- 6 Give a short note on food irradiation.
- 7 Give a short note on chromatography.

IV Write an essay on any ONE of the following

(1x10=10)

- 1 Describe the biochemical changes that occur during storage of food grains, fruits and vegetables.
- 2 Describe the different biotechnological tools used for food preservation.
