



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Tech. (Food Engg. & Tech.) 2019 Admission**

**III Semester -Final Examination-February 2021**

**Fdqu 2104**

**Biochemistry of Processing and Preservation (1+1)**

**Marks: 50**  
**Time: 2 hours**

**I Fill in the blanks**

**(10x1=10)**

1. \_\_\_\_\_ is the unit for ionizing radiation.
2. Browning of cut fruits is caused by \_\_\_\_\_ enzyme.
3. Temperature for freezing is \_\_\_\_\_.
4. \_\_\_\_\_ is responsible for oxidation rancidity.
5. Causative organism in aflatoxin is \_\_\_\_\_.

**State True or False**

6. Disintegration of pectin causes ripening of fruits.
7. Sugar caramelizes at 80°C.
8. The organism responsible for fermentation in pickles is yeast.
9. Vitamin C leach out of vegetables when immersed in hot water.
10. Salt is a class II preservative.

**II Write Short notes on ANY FIVE of the following**

**(5x2=10)**

1. Explain the role of ethylene in fruit ripening.
2. What is electrophoresis?
3. Explain dextrinisation.
4. List the stages of sugar cookery.
5. What is Hydrogenation of fats?
6. Briefly explain the principle of freeze drying.
7. Principles of food preservation.

**III Answer ANY FIVE of the following.**

**(5x4=20)**

1. Discuss on the nutrient loss during cooking and any three methods to minimize the cooking loss.
2. Explain the changes occurring during freezing and thawing.
3. What are the biochemical changes happening during pickling.
4. Explain gas chromatography.
5. Elaborate on the denaturation of proteins.
6. Steps involved in the process of malting.
7. Intrinsic and extrinsic factors affecting the growth of microorganisms.

**IV Write an essay on ANY ONE of the following**

**(1x10=10)**

1. Explain enzymatic and non-enzymatic browning reactions and summarize the methods to prevent browning reactions.
2. Discuss on the role of biotechnology in food preservation.

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