



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Food Engg.) 2016 Admission
III Semester Final Examination-January-2018

Fdqu.2105

Food Microbiology (1+1)

Marks: 50

Time: 2 hours

(10x1=10)

I **Fill in the blanks**

- 1 Time temperature combination for HTST pasteurization is -----
- 2 -----invades the lenticels of apple to initiate lenticels rot.
- 3 -----bacteria are those which survive pasteurization.
- 4 Aflatoxin is produced by -----
- 5 Bacterial soft rot is caused by -----

State True or False

- 6 Lactic acid production takes place in the natural production of pickles.
- 7 *Botrytis cinerea* causes blue mold rot in vegetables.
- 8 Propionic acid is used as food preservative.
- 9 Sauerkraut is the type of fermented milk product.
- 10 The expansion of SCP is Special Culture Protein.

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

(5x2=10)

- 1 Write short note on nisin.
- 2 What is Radurization and Radicidation
- 3 What is Botulism.
- 4 Differentiate Z value and F value.
- 5 Growth characteristics of Thermophiles
- 6 Write short note on Freeze drying
- 7 Intermediate Moisture Foods

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

(5x4=20)

- 1 What is single cell protein and describe about the substrates and microorganisms used for its production?
- 2 Write short note on spoilage of bread.
- 3 Write about classification of foods based on acidity.
- 4 Describe about various indicators of Food Safety.
- 5 Describe about principles of Food Preservation.
- 6 Difference between quick freezing and slow freezing of foods.
- 7 Types of spoilage in Thermophilic spore forming bacteria

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

(1x10=10)

- 1 Write in detail about the factors affecting the growth of microorganisms in food.
- 2 Elaborate about the various food preservation methods and explain any two in detail.
