

Reg. No. \_\_\_\_\_



**UNIVERSITY OF EMBU**

**2017/2018 ACADEMIC YEAR**

**SECOND SEMESTER EXAMINATIONS**

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN  
MICROBIOLOGY AND BIOTECHNOLOGY**

**SBT 317: FOOD MICROBIOLOGY**

**DATE: APRIL 3, 2018**

**TIME: 2:00 -4:00 PM**

**INSTRUCTIONS:** Answer ALL Questions from SECTIONS A and B, and ONE Question selected from Section C.

**SECTION A: Multiple Choice Questions (1 Mark each)**

Please tick in the box opposite the correct answer.

1. Which of the following is not an intrinsic factor for the microbial growth;

- pH
- Moisture
- Oxidation-Reduction potential
- Temperature

2. Which microorganism causes greening of the sausages?

- Pseudomonas*
- Leuconostoc*
- Micrococcus*
- Streptococcus*

3. The time temperature combination for HTST pasteurization of 71.7°C for 15 sec is selected on the basis of;

*Coxiella Burnetii*

*C. botulinum*

*E. coli*

*B. subtilis*

4. Which of the following requires two types of fermentations for its production?

Pickle

Yoghurt

Vinegar

Sausages

5. A special beer yeast of the top type is;

*S. cerevisiae*

*S. thermophilus*

*S. carlsbergensis*

None of the above

6. Which of the following bacteria genus is used to make yoghurt?

Lactobacillus

Acetobacter

Propionibacteria

Formicillus

7. In bread manufacturing, alcoholic fermentation is carried out by;

*Streptococcus thermophilus*

*Lactobacillus bulgaricus*

*Saccharomyces cerevisiae*

None of the above

8. The crushed grapes used for wine manufacturing are also known as;

- Wort
- Must
- Hop
- None of the above

9. A stable food is;

- One that has not spoiled yet
- Nonperishable
- One that has had additives added
- All the above

10. The main cause of green rot in eggs is?

- Pseudomonas fluorescens*
- Micrococcus species*
- Molds*
- All the above

11. Botulism is caused by the presence of toxin developed by;

- Clostridium tyrobutyricum*
- Clostridium sporogenes*
- Clostridium botulinum*
- None of the above

12. Which of the following microorganisms is commonly used as probiotics?

- Saccharomyces cerevisiae*
- Lactobacillus acidophilus*
- Ralstonia eutropha*
- All the above

13. Hydrolysis is undergone by which food products;

- Meat
- Starchy food
- Fruits
- All the above

14. The chief spoilage organisms on smoked fish are;

- Molds
- Bacteria
- Fungi
- None of the above

15. Lactic acid bacteria include;

- Lactococcus lactis*
- Lactococcus cremoris*
- Bifidobacterium*
- All the above

**SECTION B: SHORT ANSWER QUESTIONS (5 Marks Each)**

**Your answers should be brief and to the point (Use the examination answer book provided)**

16. Describe the microbial growth cycle in a contaminated food sample.

17. Outline the types of spoilage that can occur in raw meat under aerobic condition.

18. You have been appointed as a chief quality control officer of a regional wine manufacturing industry. Discuss briefly the mechanisms you would put in place, to ensure that the company produces quality and safe wine as required by the authority.

19. Explain the principle behind sauerkraut preparation.

20. Give a brief account of the contamination of cereal and cereal products.

21. Distinguish between food borne infections and food intoxication.

**SECTION C: ESSAY QUESTIONS (25 Marks Each)**

**Write an essay on any ONE of the following topics (Use the examination answer book provided)**

22. Discuss the common food preservation methods.
23. You are appointed as a senior Public Health Officer in your county. Explain how you would investigate a suspected incident of food borne pathogen outbreak.
24. Give an account of the microbiology of fruits and vegetables.

**--END--**

