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53 (FPT 404) FOMC

2017

FOOD MICROBIOLOGY

Paper : FPT 404

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer **any five** questions.

1. (i) What is a bacteriocin ? Write down the mode of action of bacteriocin. 1+4
- (ii) What are the various differences between bacteriocin ? 7
- (iii) What do you understand by top fermenting and bottom fermenting yeast ? Give *one* example of each. 4+2
- (iv) Name the bacteriocin produced by *lactobacillus sake* and *lactococcus lactis*. 2
2. (i) What are the advantages of fermentation ? 5

Contd.

- (ii) What are homolactic and heterolactic fermentation ? 2
- (iii) Define genetically modified foods. What are the main advantages of genetically modified foods ? 1+4
- (iv) Write about the production protocol and health benefits of *any one* fermented Indian foods. 8
3. (i) Tabulate the total ATP yield during aerobic respiration of Glucose in Eukaryotic cell. 6
- (ii) What is food microbiology ? Why the microbes are important in foods ? 1+4
- (iii) Write short notes on : 3×3=9
- (a) Spoilage of butter
- (b) Spoilage of ice cream
- (c) Spoilage of cheese.
4. (i) How meat can be preserved by adding nitrite ? 4

- (ii) What is golden rice ? 3
- (iii) Why botulism is more prominent in fish as compared to red meat ? 4
- (iv) Write about the spoilage due to microorganisms in egg and the preventive measures against each spoilage. 9
5. (i) Define : 1×10
- (a) Gene
 - (b) Detoxification
 - (c) Phosphorylation
 - (d) Chemiosmosis
 - (e) Aerobic respiration
 - (f) Metabolism
 - (g) Genetic engineering
 - (h) Glycolysis
 - (i) Pasteurization
 - (j) Sterilization.
- (ii) Write the full form : 1×10
- (a) LAB
 - (b) ATP
 - (c) GTP
 - (d) Nan

- (e) TCA cycle
- (f) PFA
- (g) CFU
- (h) GMO
- (i) SPC
- (j) FDA

6. (i) Write short notes on : 3×3

- (a) Botulism
- (b) Staphylococcus in toxification
- (c) Salmonellosis

(ii) What do you mean by food spoilage ?
What are the important food spoilage
bacteria ? 1+5

(iii) What is infection, intoxication and
toxicoinfection ? 3

(iv) What happens if a person consume
contaminated or spoiled food ? 2

7. (i) Write a note on viral food borne
diseases. 10

(ii) Discuss about the food borne animal
parasite and their harmful effects in
food. 10