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Reg. No. :

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PMBM 41

M.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2020.

Fourth Semester

Microbiology

FOOD MICROBIOLOGY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. _____ inhibitors naturally present in freshly drawn milk.
 - (a) Lacteins and anticolidiform factors
 - (b) Benzoic and sorbic acid
 - (c) Alcohol and Benzoic acid
 - (d) Capric acid

2. Propioni bacterium —————
- (i) these bacteria are small, non motile
 - (ii) gram negative
 - (iii) cause colour defects in cheese
 - (iv) they ferment lactic acid, carbohydrates and polyalcohol
- Select the correct answer using the code given below :
- (a) (i) and (iv) only (b) (i), (iii) and (iv) only
 - (c) (i) and (ii) only (d) All of these
3. Asepsis is —————
- (a) reducing the populations of microorganisms
 - (b) identifying methods of destruction
 - (c) sterility checks
 - (d) keeping out microorganisms
4. Nitrites can react with secondary and tertiary amines to form —————
- (a) Nitrosamines (b) Indole
 - (c) Mercaptans (d) Skatole

5. Aflatoxin _____
- (i) It is a bacterial toxin
 - (ii) It is produced by *Aspergillus flavus* and *Aspergillus parasiticus*
 - (iii) It is toxic to quail, cat and chickens
 - (iv) It is carcinogenic to trout, rat, sheep

Select the correct answer using the code given below :

- (a) (i) and (ii) only
 - (b) (i) and (iii) only
 - (c) (ii), (iii) and (iv) only
 - (d) All of these
6. Traveler's diarrhea is caused due to the toxin produced by _____
- (a) *Clostridium* (b) *Bacillus*
 - (c) *Escherichia* (d) *Yersinia*
7. _____ are distilled from saccharified and fermented grain mashes.
- (a) Whiskeys (b) Rum
 - (c) Brandy (d) Sonti

8. Crushed grapes are called as _____
(a) Wort (b) Must
(c) Fortified (d) Dessert
9. The codex guidelines for HACCP has _____
(a) five principles (b) six principles
(c) seven principles (d) none of the above
10. _____ is a certification mark employed on agricultural products in India.
(a) FDA (b) HACCP
(c) AGMARK (d) ISRO

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) How does the O-R potential of a food influence microbial growth?

Or

- (b) Write notes on Bacillus Sp importance in food microbiology.

12. (a) Discuss classification of food by ease of spoilage.

Or

(b) Write notes on the contamination of egg.

13. (a) What is botulism? Describe.

Or

(b) What are mycotoxins? Give examples.

14. (a) Write short notes on the following :

(i) Miso

(ii) Tempen

Or

(b) Discuss about genetically engineered food.

15. (a) Discuss the sanitation of equipments.

Or

(b) Write notes on the health of employees.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the concept and scope of microbiology.

Or

- (b) Write notes on yeast importance in a food industry.

17. (a) Describe the preservation of food by chemicals.

Or

- (b) Discuss contamination, spoilage and preservation of meat.

18. (a) Write a detailed notes on E.coli.

Or

- (b) Write short notes on the following :

(i) Patulin

(ii) Ochratoxin

(iii) Luteoskyrin

19. (a) Write an essay on cheese manufacturing process.

Or

(b) Write a detailed notes on the beer making process.

20. (a) Discuss about Mushroom Cultivation.

Or

(b) What is HACCP? Explain its principles.
