



Please answer the following:-

I- First question (6 marks)(ILOs: a4,a5,a8,b1,b2,b3,b4,c4,c5)

Fill in the spaces with the correct answers:- (0.25mark for each space)

- 1- Candling of eggs is a test used for without
While Official Air Cell Gauge is used for
- 2- Changes of eggs during aging are¹.....,².....,
.....³..... and⁴.....
- 3- Chemical antimicrobial defenses of egg are¹.....,
.....².....,³....., and⁴.....
- 4- Defects renders eggs unfit for consumption are¹.....,
.....².....,³.....,⁴..... and
.....⁵.....
- 5- Ripening of cheeses can be attained by¹.....,
.....².....,³..... and⁴.....
- 6- Emulsifiers used for processed cheese are or
..... and its function are and
.....

II- Second question (6.5 marks)(ILOs:a1,a2,a4,a5,a6,b1,b2,b3,b4,c4)

- 1- Differentiate (in a table) between *S.aureus* and *C.boyulinum* food poisoning cases.
(3 marks)
- 2- Enumerate only the (CCP1) during milk powder, condensed and evaporated milk products manufacturing.
(1.5 marks)
- 3- Discuss in details about thickening and button in concentrated milk.
(2 marks)



III- Third question (6.5 marks)(ILOs: a1,a2,a3,a4,a5,a6,a7,b2,b3,b4,c3,c4)

A)- Mark (✓) for true and (X) for wrong, then correct the wrong statement and give reason(s). (5 marks/one mark each)

1. Gel tests used for detection of mastitis mainly depend on pH of milk.
2. Crumbly body ice cream characterized by pasty or putty texture.
3. Reichert Meissel number of butter fat is lower than the number of coconut oil.
4. During yoghurt manufacture, the relationship between starter components is competitive.
5. Prebiotics are mono or mixed cultures of live organisms which play an important role against gastrointestinal illness.

B) Choose the correct answer:- (1.5 marks/0.5 mark each)

- 1- Acid value and acid degree measure present in fat or oil.
a) free fatty acids b) saturated fatty acids c) volatile fatty acids
- 2- In kieler's test for detection of mastitis, milk sample contains 5 cells/field is judged
a) + ve b) ++ ve c) +++ ve
- 3- Mastitis leads to change in milk constituent as.....
a) decrease in chloride b) decrease in pH c) increase in lactoglobuline

IV- Fourth question (6 marks/ one mark each)(ILOs:a1,a4,a5,a6,b3,b4,c4)

Give reason(s) of the following:-

- 1- Water quality inside the dairy plant must be assessed chemically and microbiologically.
- 2- Cooling milk immediately after pasteurization is very important.
- 3- Brown coloration and caramel-like flavor of in-bottle sterilized milk.
- 4- Cream used for butter manufacture should be pasteurized.
- 5- Working of butter grains is extremely important.
- 6- Ghee has longer keeping quality than butter.

With best wishes
Staff members of food control department

Head of department

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