

# National Testing Agency

<b>Question Paper Name :</b>	Dairy Microbiology 17th September Shift 2
<b>Subject Name :</b>	Dairy Microbiology
<b>Creation Date :</b>	2021-09-17 18:54:39
<b>Duration :</b>	120
<b>Total Marks :</b>	480
<b>Display Marks:</b>	Yes

## Dairy Microbiology

<b>Group Number :</b>	1
<b>Group Id :</b>	190889110
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	120
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	480
<b>Is this Group for Examiner? :</b>	No

## Part A: General Knowledge

<b>Section Id :</b>	190889254
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory

<b>Number of Questions :</b>	20
<b>Number of Questions to be attempted :</b>	20
<b>Section Marks :</b>	80
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889294
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 19088912502 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which of the following is the device used to measure the power and speed of the wind?

1. Avometer
2. Anemometer
3. Airometer
4. Aviontimeter

**Options :**

19088949901. 1

19088949902. 2

19088949903. 3

19088949904. 4

**Question Number : 2 Question Id : 19088912503 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Optical fibre used the concept of which of the following?

1. Reflection
2. Refraction
3. Total internal reflection
4. Total internal refraction

**Options :**

- 19088949905. 1
- 19088949906. 2
- 19088949907. 3
- 19088949908. 4

**Question Number : 3 Question Id : 19088912504 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Yellow vein mosaic is the viral disease of which of the following plants?

- 1. Ladyfinger
- 2. Papaya
- 3. Sugarcane
- 4. Banana

**Options :**

- 19088949909. 1
- 19088949910. 2
- 19088949911. 3
- 19088949912. 4

**Question Number : 4 Question Id : 19088912505 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following organ(s) is affected by Mumps disease?

- 1. Entire body
- 2. Skin
- 3. Eye
- 4. Parotid

**Options :**

- 19088949913. 1
- 19088949914. 2
- 19088949915. 3

19088949916. 4

**Question Number : 5 Question Id : 19088912506 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is the chemical name of vitamin B<sub>2</sub>?

1. Riboflavin
2. Calciferol
3. Pyridoxin
4. Niacin

**Options :**

19088949917. 1

19088949918. 2

19088949919. 3

19088949920. 4

**Question Number : 6 Question Id : 19088912507 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is not the input unit of the computer?

1. Mouse
2. Keyboard
3. Screen
4. Scanner

**Options :**

19088949921. 1

19088949922. 2

19088949923. 3

19088949924. 4

**Question Number : 7 Question Id : 19088912508 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The digital computer operates on which of the following principle?

1. Measurement
2. Calculation
3. Logical
4. Electrification

**Options :**

19088949925. 1

19088949926. 2

19088949927. 3

19088949928. 4

**Question Number : 8 Question Id : 19088912509 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The non-cooperation movement of Gandhiji was launched in which of the following year?

1. 1915
2. 1922
3. 1920
4. 1930

**Options :**

19088949929. 1

19088949930. 2

19088949931. 3

19088949932. 4

**Question Number : 9 Question Id : 19088912510 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

An Islamic revivalist movement named Wahabi movement was founded by which of the following person?

1. Sian Saheb
2. Syed Ahmed
3. Haji Shariat-Allah
4. DaduMian

**Options :**

19088949933. 1

19088949934. 2

19088949935. 3

19088949936. 4

**Question Number : 10 Question Id : 19088912511 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is considered as the “Magna Carta of England Education in India”?

1. Hunter education commission
2. Lord Macaulay’s Minute
3. Wood’s Despatch
4. Thomas Babington Macaulay

**Options :**

19088949937. 1

19088949938. 2

19088949939. 3

19088949940. 4

**Question Number : 11 Question Id : 19088912512 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following nutrient does not come under the ambit of 'macro-nutrients in Soil Health Card?

1. Nitrogen
2. Zinc
3. Phosphorous
4. Potassium

**Options :**

19088949941. 1

19088949942. 2

19088949943. 3

19088949944. 4

**Question Number : 12 Question Id : 19088912513 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Cole crops, root crops and legumes come under the ambit of which of the following?

1. Olericulture
2. Pomology
3. Viticulture
4. Arboriculture

**Options :**

19088949945. 1

19088949946. 2

19088949947. 3

19088949948. 4

**Question Number : 13 Question Id : 19088912514 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The study of individual trees, shrubs, vines, and perennial woody plants is known as which of the following?

1. Turf management
2. Arboriculture
3. Pomology
4. Viticulture

**Options :**

19088949949. 1

19088949950. 2

19088949951. 3

19088949952. 4

**Question Number : 14 Question Id : 19088912515 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The ministry is implementing MIDH (Mission for Integrated Development of Horticulture) with effect from which of the following year?

1. 2012-13
2. 2019-20
3. 2015-16
4. 2014-15

**Options :**

19088949953. 1

19088949954. 2

19088949955. 3

19088949956. 4

**Question Number : 15 Question Id : 19088912516 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



The interaction of soils with living things, particularly plants are well known as which of the following?

1. Edaphology
2. Pedology
3. Soil zoology
4. Pedogenesis

**Options :**

19088949957. 1

19088949958. 2

19088949959. 3

19088949960. 4

**Question Number : 16 Question Id : 19088912517 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following systems has also incorporated social aspects in itself?

1. Landscaping
2. Permaculture
3. Horticulture
4. Forest gardening

**Options :**

19088949961. 1

19088949962. 2

19088949963. 3

19088949964. 4

**Question Number : 17 Question Id : 19088912518 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What do you term the phenomenon whereby the specific gene is added to the plant for producing a desirable phenotype?

1. Genetic manipulation
2. Genetic recombination
3. Genetic modification
4. Genetic hybridisation

**Options :**

19088949965. 1

19088949966. 2

19088949967. 3

19088949968. 4

**Question Number : 18 Question Id : 19088912519 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What is the focus of the participatory plant breeding program?

1. Scientists
2. Plants
3. Environment
4. Farmers

**Options :**

19088949969. 1

19088949970. 2

19088949971. 3

19088949972. 4

**Question Number : 19 Question Id : 19088912520 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

How do you term the form of agriculture, in which, industrialized production of crops and animal products takes place?

1. Manufactured agriculture
2. Modern agriculture
3. Industrial agriculture
4. Mechanistic agriculture

**Options :**

19088949973. 1

19088949974. 2

19088949975. 3

19088949976. 4

**Question Number : 20 Question Id : 19088912521 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Micro-irrigation fund of Rs. 5.000 crore has been placed with which of the following organization?

1. NABARD
2. IDBI
3. SBI
4. RRBs

**Options :**

19088949977. 1

19088949978. 2

19088949979. 3

19088949980. 4

## **Part B Core : Dairy Science:Dairy Technology & Food Technology**

**Section Id :** 190889255

**Section Number :** 2

<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889295
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 19088912522 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The casein fraction which has maximum carbohydrates associated with it is \_\_\_\_\_.

- |           |           |
|-----------|-----------|
| (1) Alpha | (2) Beta  |
| (3) Kappa | (4) Gamma |

**Options :**

19088949981. 1

19088949982. 2

19088949983. 3

19088949984. 4

**Question Number : 22 Question Id : 19088912523 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What is the proportion in which buffalo milk with 6.5% fat and low fat milk with 0.5% fat are to be combined in order to produce mixed milk conforming to standardized milk fat standards?

- |           |           |
|-----------|-----------|
| (1) 1 : 1 | (2) 2 : 1 |
| (3) 1 : 2 | (4) 1 : 3 |

**Options :**

- 19088949985. 1
- 19088949986. 2
- 19088949987. 3
- 19088949988. 4

**Question Number : 23 Question Id : 19088912524 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The environmental management of a dairy plant is denoted by the ISO series \_\_\_\_\_.

- |           |           |
|-----------|-----------|
| (1) 9000  | (2) 11000 |
| (3) 14000 | (4) 22000 |

**Options :**

- 19088949989. 1
- 19088949990. 2
- 19088949991. 3
- 19088949992. 4

**Question Number : 24 Question Id : 19088912525 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I	List II
(A) Fat in infant food	(I) 10%
(B) Fat in table cream	(II) 19%
(C) Fat in condensed milk	(III) 20%
(D) Fat in ice cream	(IV) 9%

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(IV), (C)-(III), (D)-(II)
- (2) (A)-(III), (B)-(II), (C)-(I), (D)-(IV)
- (3) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (4) (A)-(IV), (B)-(III), (C)-(I), (D)-(II)

**Options :**

- 19088949993. 1
- 19088949994. 2
- 19088949995. 3
- 19088949996. 4

**Question Number : 25 Question Id : 19088912526 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Deficiency of calcium in the diet leads to

- |                  |             |
|------------------|-------------|
| (1) Goitre       | (2) Anemia  |
| (3) Osteoporosis | (4) Rickets |

**Options :**

- 19088949997. 1
- 19088949998. 2
- 19088949999. 3
- 19088950000. 4

**Question Number : 26 Question Id : 19088912527 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

\_\_\_\_\_ is an example of a medical food.

- |                           |                             |
|---------------------------|-----------------------------|
| (1) Sports drinks         | (2) Symbiotic yoghurt       |
| (3) Flavoured dairy drink | (4) Lactose hydrolysed milk |

**Options :**

- 19088950001. 1
- 19088950002. 2
- 19088950003. 3
- 19088950004. 4

Question Number : 27 Question Id : 19088912528 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The antimicrobial protein found in milk is

- |                       |                            |
|-----------------------|----------------------------|
| (1) Glycomacropeptide | (2) Lactoferrin            |
| (3) MGF protein       | (4) $\beta$ -Lactoglobulin |

Options :

19088950005. 1

19088950006. 2

19088950007. 3

19088950008. 4

Question Number : 28 Question Id : 19088912529 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The protein content in retentate can be further increased using

- |                     |                     |
|---------------------|---------------------|
| (1) Diafiltration   | (2) Nanofiltration  |
| (3) Microfiltration | (4) Reverse osmosis |

Options :

19088950009. 1

19088950010. 2

19088950011. 3

19088950012. 4

Question Number : 29 Question Id : 19088912530 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Elimination of \_\_\_\_\_ by removing the gene from cow milk by transgenesis may improve the problem of cow milk allergy in children.

- |                           |                            |
|---------------------------|----------------------------|
| (1) $\beta$ -Casein       | (2) Lactose                |
| (3) $\alpha$ -Lactalbumin | (4) $\beta$ -Lactoglobulin |

**Options :**

19088950013. 1

19088950014. 2

19088950015. 3

19088950016. 4

**Question Number : 30 Question Id : 19088912531 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : It is, in general difficult to stabilize a water in oil emulsion.

Reason (R) : Charge effects are not applicable and only steric stabilization is possible in W/O emulsions.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088950017. 1

19088950018. 2

19088950019. 3

19088950020. 4

**Question Number : 31 Question Id : 19088912532 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which among the following is an example of sparkling wine?

- (1) Port Wine (2) Sherry  
(3) Champagne (4) Red wine

**Options :**

19088950021. 1

19088950022. 2

19088950023. 3

19088950024. 4

**Question Number : 32 Question Id : 19088912533 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Maximum heat damage occur during the \_\_\_\_\_ of drying.

- (1) Falling Rate Period (2) Constant Rate Period  
(3) Come-up Period (4) Post drying stage

**Options :**

19088950025. 1

19088950026. 2

19088950027. 3

19088950028. 4

**Question Number : 33 Question Id : 19088912534 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following is absent in cocoa butter?

- (1) Palmitic acid (2) Oleic acid  
(3) Stearic acid (4) Lauric acid

**Options :**

19088950029. 1

19088950030. 2

19088950031. 3

19088950032. 4

**Question Number : 34 Question Id : 19088912535 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following is the reduced form of myoglobin?

- |                          |                    |
|--------------------------|--------------------|
| (1) Oxymyoglobin         | (2) Metmyoglobin   |
| (3) Oxygenated myoglobin | (4) Deoxymyoglobin |

**Options :**

19088950033. 1

19088950034. 2

19088950035. 3

19088950036. 4

**Question Number : 35 Question Id : 19088912536 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Extensive heating of starchy rich food material may leads to the formation of \_\_\_\_\_.

- |                      |                 |
|----------------------|-----------------|
| (1) Resistant starch | (2) Histamine   |
| (3) Acrylamide       | (4) Waxy starch |

**Options :**

19088950037. 1

19088950038. 2

19088950039. 3

19088950040. 4

**Question Number : 36 Question Id : 19088912537 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which among the following is not a reconstitution property of milk powder?

- |                   |                    |
|-------------------|--------------------|
| (1) Sinkability   | (2) Wettability    |
| (3) Agglomeration | (4) Dispersibility |

**Options :**

19088950041. 1

19088950042. 2

19088950043. 3

19088950044. 4

**Question Number : 37 Question Id : 19088912538 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I	List II
(A) Malolactic Fermentation	(I) Bread
(B) Pitching	(II) Wine
(C) Dextrinization	(III) Meat
(D) Stunning	(IV) Beer

Choose the correct answer from the options given below :

- (1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
- (2) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)
- (3) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (4) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

**Options :**

19088950045. 1

19088950046. 2

19088950047. 3

19088950048. 4

**Question Number : 38 Question Id : 19088912539 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Cake flour is often subjected to chlorination to improve the quality of cake.

Reason (R) : Chlorination bleaches the carotenoids of wheat flour, and imparts whiteness. It also oxidizes flour starch which swells more on gelatinization.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088950049. 1

19088950050. 2

19088950051. 3

19088950052. 4

**Question Number : 39 Question Id : 19088912540 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Fruits like mango are exposed to Vapour Heat Treatment (VHT) before export as quarantine measure.

Reason (R) : Exposure to vapour check the biosynthesis of ethylene and thus inhibit ripening process.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088950053. 1

19088950054. 2

19088950055. 3

19088950056. 4

**Question Number : 40 Question Id : 19088912541 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Food emulsions exhibits \_\_\_\_\_ type of rheological behaviour.

- |                    |                      |
|--------------------|----------------------|
| (1) Newtonian      | (2) Rheopectic       |
| (3) Shear thinning | (4) Shear thickening |

**Options :**

19088950057. 1

19088950058. 2

19088950059. 3

19088950060. 4

**Question Number : 41 Question Id : 19088912542 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Average Magnesium (Mg) content of raw milk is about

- |                   |                    |
|-------------------|--------------------|
| (1) 1.2 mg/100 ml | (2) 12 mg/100 ml   |
| (3) 120 mg/100 ml | (4) 0.12 mg/100 ml |

**Options :**

- 19088950061. 1
- 19088950062. 2
- 19088950063. 3
- 19088950064. 4

**Question Number : 42 Question Id : 19088912543 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Volumetric method for detection of lactose in milk

- |                         |                           |
|-------------------------|---------------------------|
| (1) Lane-Eynon Method   | (2) Werner-Schimdt Method |
| (3) Polarimetric Method | (4) Rose-Gottlieb Method  |

**Options :**

- 19088950065. 1
- 19088950066. 2
- 19088950067. 3
- 19088950068. 4

**Question Number : 43 Question Id : 19088912544 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Crude protein content of milk and milk product is calculated by multiplying nitrogen content with factor

- |          |          |
|----------|----------|
| (1) 6.25 | (2) 6.38 |
| (3) 6.30 | (4) 5.75 |

**Options :**

19088950069. 1

19088950070. 2

19088950071. 3

19088950072. 4

**Question Number : 44 Question Id : 19088912545 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Vacreation refers to

- |                           |                          |
|---------------------------|--------------------------|
| (1) Vaccum packaging      | (2) Vaccum sterilization |
| (3) Vaccum pasteurization | (4) Vaccuum creation     |

**Options :**

19088950073. 1

19088950074. 2

19088950075. 3

19088950076. 4

**Question Number : 45 Question Id : 19088912546 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For selection of wavelength, spectrophotometer uses :

- |                   |                |
|-------------------|----------------|
| (1) Processor     | (2) Transducer |
| (3) Monochromator | (4) Slit       |

**Options :**

19088950077. 1

19088950078. 2

19088950079. 3

19088950080. 4

**Question Number : 46 Question Id : 19088912547 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Following product exhibit maximum heat induced changes

- |                              |                     |
|------------------------------|---------------------|
| (1) Sweetened Condensed Milk | (2) Evaporated milk |
| (3) Khoa                     | (4) Milk Powder     |

**Options :**

19088950081. 1

19088950082. 2

19088950083. 3

19088950084. 4

**Question Number : 47 Question Id : 19088912548 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Casein : Fat ratio is adjusted in cheese milk to

- |                 |                 |
|-----------------|-----------------|
| (1) 0.45 – 0.60 | (2) 0.68 – 0.70 |
| (3) 0.68 – 0.80 | (4) 0.60 – 0.70 |

**Options :**

19088950085. 1

19088950086. 2

19088950087. 3

19088950088. 4

**Question Number : 48 Question Id : 19088912549 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

During cheese making enzyme rennet acts on

- |                          |                     |
|--------------------------|---------------------|
| (1) $\alpha S_1$ -Casein | (2) $\beta$ -Casein |
| (3) $\alpha S_2$ -Casein | (4) K-Casein        |

**Options :**



19088950089. 1

19088950090. 2

19088950091. 3

19088950092. 4

**Question Number : 49 Question Id : 19088912550 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For which of the water soluble vitamin milk is the only source for vegetarians

- |                |                    |
|----------------|--------------------|
| (1) Folic acid | (2) Cyanocobalamin |
| (3) Thiamin    | (4) Biotin         |

**Options :**

19088950093. 1

19088950094. 2

19088950095. 3

19088950096. 4

**Question Number : 50 Question Id : 19088912551 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

As per FSSAI, 2006, maximum free fatty acid content (% oleic acid) in ghee is

- |          |          |
|----------|----------|
| (1) 1.5% | (2) 3%   |
| (3) 2.5% | (4) 3.5% |

**Options :**

19088950097. 1

19088950098. 2

19088950099. 3

19088950100. 4

**Question Number : 51 Question Id : 19088912552 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The area of pipe at section XX' is  $315 \text{ cm}^2$ . The area of pipe at section YY' is twice the area of section XX'. The velocity at section XX' is  $4.5 \text{ m/sec}$ . Find the velocity at section YY'. Also determine flow rate through the pipe.

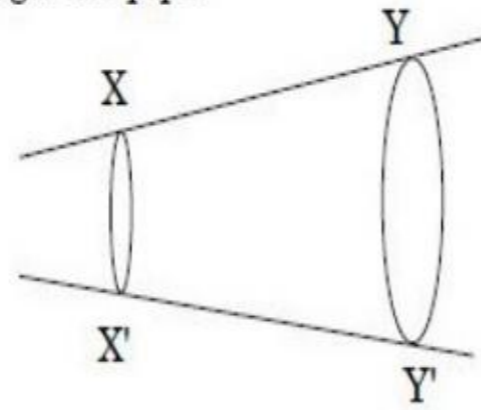


Fig. 1

- (1)  $V = 2.25 \text{ m/sec}$ ,  $Q = 0.14175 \text{ m}^3/\text{sec}$
- (2)  $V = 22.25 \text{ m/sec}$ ,  $Q = 0.14175 \text{ m}^3/\text{sec}$
- (3)  $V = 2.25 \text{ m/sec}$ ,  $Q = 1.4175 \text{ m}^3/\text{sec}$
- (4)  $V = 22.25 \text{ m/sec}$ ,  $Q = 1.4175 \text{ m}^3/\text{sec}$

**Options :**

- 19088950101. 1
- 19088950102. 2
- 19088950103. 3
- 19088950104. 4

**Question Number : 52 Question Id : 19088912553 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The thermal conductivity of frozen food is \_\_\_\_\_ than foods at normal temperature.

- (1) Lower
- (2) Higher
- (3) Same
- (4) Can not predict

**Options :**

- 19088950105. 1
- 19088950106. 2
- 19088950107. 3

19088950108. 4

**Question Number : 53 Question Id : 19088912554 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following arrangement could eliminate the use of pump between effects in evaporation?

- (1) Forward feed
- (2) Backward feed
- (3) Mixed feed
- (4) Its theoretically impossible

**Options :**

19088950109. 1

19088950110. 2

19088950111. 3

19088950112. 4

**Question Number : 54 Question Id : 19088912555 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Ingress of oxygen into the package \_\_\_\_\_.

- (1) Decrease the activities of the enzymes
- (2) Increase the activities of the enzyme
- (3) No change in the activities of the enzyme
- (4) Initially increase followed by decrease in enzyme activity

**Options :**

19088950113. 1

19088950114. 2

19088950115. 3

19088950116. 4

**Question Number : 55 Question Id : 19088912556 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The heating mechanism of microwave processing is

- |                        |                      |
|------------------------|----------------------|
| (1) Dipole rotation    | (2) Infrared heating |
| (3) Ionic polarization | (4) Both (1) and (3) |

**Options :**

19088950117. 1

19088950118. 2

19088950119. 3

19088950120. 4

**Question Number : 56 Question Id : 19088912557 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The water sorption by a food is independent of \_\_\_\_\_ .

- |                                    |   |
|------------------------------------|---|
| (1) Composition                    | (2) Physico-chemical state of ingredients |
| (3) Physical structure of the food | (4) Exposure to light                     |

**Options :**

19088950121. 1

19088950122. 2

19088950123. 3

19088950124. 4

**Question Number : 57 Question Id : 19088912558 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In shell and tube heat exchange the tube, which carry milk through it, should be made up of

- |                     |            |
|---------------------|------------|
| (1) Aluminium       | (2) Copper |
| (3) Stainless Steel | (4) Iron   |

**Options :**

- 19088950125. 1
- 19088950126. 2
- 19088950127. 3
- 19088950128. 4

**Question Number : 58 Question Id : 19088912559 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The HTST process involves heating milk to

- (1) 62°C for 30 min
- (2) 72°C for 15 sec
- (3) 65°C for 15 min
- (4) 100°C for < 1 sec

**Options :**

- 19088950129. 1
- 19088950130. 2
- 19088950131. 3
- 19088950132. 4

**Question Number : 59 Question Id : 19088912560 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is known as heart of the vapour compression refrigeration system?

- (1) Condenser
- (2) Evaporator
- (3) Receiver
- (4) Compressor

**Options :**

- 19088950133. 1
- 19088950134. 2
- 19088950135. 3
- 19088950136. 4

**Question Number : 60 Question Id : 19088912561 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What is the full form of PLC?

- |                                |                               |
|--------------------------------|-------------------------------|
| (1) Programmable Logo Control  | (2) Preventable Logic Control |
| (3) Programmable Logic Control | (4) Processed Linear Control  |

**Options :**

19088950137. 1

19088950138. 2

19088950139. 3

19088950140. 4

**Question Number : 61 Question Id : 19088912562 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Two agreement which are coming into force after Uruguay sound of multilateral Trade Negotiations are

- (A) TBT and SPS
- (B) TRIPS and SPS
- (C) GATT and WTO
- (D) TBT and GATT

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950141. 1

19088950142. 2

19088950143. 3

19088950144. 4

**Question Number : 62 Question Id : 19088912563 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A failure to meet quality requirement is known as

- (A) Conformity
- (B) Observation
- (C) Non-conformity
- (D) Unsatisfactory

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950145. 1

19088950146. 2

19088950147. 3

19088950148. 4

**Question Number : 63 Question Id : 19088912564 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Faecal Indicator of milk is

- (1) Coliforms
- (2) Escherichia coli
- (3) Salmonella
- (4) Enterococcus faecalis

**Options :**

19088950149. 1

19088950150. 2

19088950151. 3

19088950152. 4

**Question Number : 64 Question Id : 19088912565 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Father of Medical Microbiology

(1) Louis Pasteur

(2) Joseph Lister

(3) Robert Koch

(4) Anton Von Leewanhook

**Options :**

19088950153. 1

19088950154. 2

19088950155. 3

19088950156. 4

**Question Number : 65 Question Id : 19088912566 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

ISO Standard for Food Safety is

(1) ISO 9001

(2) ISO 22000

(3) ISO 14001

(4) ISO 17025

**Options :**

19088950157. 1

19088950158. 2

19088950159. 3

19088950160. 4

**Question Number : 66 Question Id : 19088912567 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Common activity test used for starter culture

- (A) Microscopic examination
- (B) Horrel Elliker test
- (C) Morphological examination
- (D) Growth on medium

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950161. 1

19088950162. 2

19088950163. 3

19088950164. 4

**Question Number : 67 Question Id : 19088912568 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Father of Biosensor is

- (A) Leoland C Clark
- (B) Leoland F Clark
- (C) Biacore
- (D) Ferland

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950165. 1

19088950166. 2

19088950167. 3

19088950168. 4

**Question Number : 68 Question Id : 19088912569 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the diseases are caused by *Coxiella burnetii*?

(A) Tuberculosis

(B) Brucellosis

(C) 'Q' fever

(D) Malta fever

Choose the most appropriate answer from the options given below

(1) (A) only

(2) (B) only

(3) (C) only

(4) (D) only

**Options :**

19088950169. 1

19088950170. 2

19088950171. 3

19088950172. 4

**Question Number : 69 Question Id : 19088912570 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Eijkmen test is used for the detection of

- (A) Coliforms
- (B) Coliphages
- (C) E. coli
- (D) Enterococci

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950173. 1

19088950174. 2

19088950175. 3

19088950176. 4

**Question Number : 70 Question Id : 19088912571 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Pathogenic bacteria major concern in sweetened condensed milk

- (A) E. coli
- (B) Listeria monocytogenes
- (C) Staphylococcus aureus
- (D) Campylobacter jejuni

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (C) only
- (4) (D) only

**Options :**

19088950177. 1

19088950178. 2

19088950179. 3

19088950180. 4

## Part C : Dairy Microbiology

<b>Section Id :</b>	190889256
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889296
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 71 Question Id : 19088912572 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following scientist demonstrated the role of bacteria and yeast in the fermentation process?

- (1) Louis Pasteur
- (2) Antony Van Leeuwenhoek
- (3) Lazzaro Spullanzani
- (4) Theodore Schwann

**Options :**

19088950181. 1

19088950182. 2

19088950183. 3

19088950184. 4

**Question Number : 72 Question Id : 19088912573 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What do you understand about Multilocus Sequence Typing (MLST)?

- (1) Identification based on nucleic acid sequence
- (2) Five to six house keeping genes can be sequenced
- (3) Comparision of genes from more than one microbial species
- (4) Detection of rRNA by labelled nucleotide probe

**Options :**

19088950185. 1

19088950186. 2

19088950187. 3

19088950188. 4

**Question Number : 73 Question Id : 19088912574 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Wall teichoic acids are teichoic acids covalently linked to peptidoglycan.

Statement II : Lipoteichoic acids are teichoic acids covalently linked to plasma membrane.

In view of the above, choose the most appropriate answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

**Options :**

19088950189. 1

19088950190. 2

19088950191. 3

19088950192. 4

**Question Number : 74 Question Id : 19088912575 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Capsules in bacteria do not required for growth and reproduction. However, they confer several advantages such as

- (A) Pathogenic bacteria to resist phagocytosis by host phagocytes
- (B) To protect against desiccation
- (C) Capsulated bacteria doesn't kill mice

Which of the above statement are true in case of capsule?

- (1) (A) and (B)
- (2) (B) and (C)
- (3) (A), (B) and (C)
- (4) (A) and (C)

**Options :**

19088950193. 1

19088950194. 2

19088950195. 3

19088950196. 4

**Question Number : 75 Question Id : 19088912576 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I	List II
(A) Phase Contrast Microscope	(I) Surface of Microorganisms
(B) Confocal Microscope	(II) Morphology
(C) Transmission Electron Microscope	(III) Microbial motility
(D) Scanning Electro Microscope	(IV) Biofilms

Choose the correct answer from the options given below :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)

**Options :**

19088950197. 1

19088950198. 2

19088950199. 3

19088950200. 4

**Question Number : 76 Question Id : 19088912577 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : The Generation time of bacteria vary markedly with microbial species and Environmental conditions.

Statement II : The Generation time of bacteria in nature usually much shorter than in culture.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088950201. 1

19088950202. 2

19088950203. 3

19088950204. 4

**Question Number : 77 Question Id : 19088912578 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following nutritional type of microorganisms uses reduced inorganic molecules as their energy and electron source but drive their carbon from organic source?

- (1) Chemoorganoheterotrophs
- (2) Chemolithoheterotrophs
- (3) Chemolithoautotrophs
- (4) Chemoorganoautotrophs

**Options :**

19088950205. 1

19088950206. 2

19088950207. 3

19088950208. 4

**Question Number : 78 Question Id : 19088912579 Question Type : MCQ Option Shuffling : No**



**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following bacteria are thermophilic psychrotrophs?

- (1) Pseudomonas and Enterobacter      (2) Bacillus and Micrococcus  
(3) Escherichia and Citrobacter      (4) Staphylococcus and Streptococcus

**Options :**

19088950209. 1

19088950210. 2

19088950211. 3

19088950212. 4

**Question Number : 79 Question Id : 19088912580 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

An Index organism for milk pasteurization is

- (1) Coxiella burnetii / Mycobacterium tuberculosis  
(2) Listeria monocytogenes / Bacillus cereus  
(3) Staphylococcus aureus / Listeria monophagus  
(4) E.coli / Salmonella

**Options :**

19088950213. 1

19088950214. 2

19088950215. 3

19088950216. 4

**Question Number : 80 Question Id : 19088912581 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I	List II
(A) Bitty cream	(I) <i>Pseudomonas syncyanea</i>
(B) Matty flavour	(II) <i>Bacillus cereus</i>
(C) Fruity flavour	(III) <i>Lactococcus lactis ssp multigenes</i>
(D) Blue discolouration	(IV) <i>Pseudomonas fragi</i>

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

**Options :**

19088950217. 1

19088950218. 2

19088950219. 3

19088950220. 4

**Question Number : 81 Question Id : 19088912582 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following are the main objective of milk pasteurization?

- (A) Elimination of Risk of diseases associated with bacterial pathogens.
- (B) Extend the shelf life of raw milk upto six months.
- (C) Extend the keeping quality of milk by inactivation of spoilage organisms.
- (D) Inactivation of Enzymes.
- (E) Inactivation of nutrients.

Choose the correct answer from the options given below :

- (1) (A) and (B) only
- (2) (A), (B) and (C) only
- (3) (A), (C) and (D) only
- (4) (A), (B), (C) and (E) only

**Options :**

19088950221. 1

19088950222. 2

19088950223. 3

19088950224. 4

**Question Number : 82 Question Id : 19088912583 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The infectious dose required for Salmonella in milk to cause Salmonellosis is

- (A) 100 cfu/ml
- (B) 1000 cfu/ml
- (C) 100000 cfu/ml
- (D) 1000000 cfu/ml
- (E)  $> 10^7$  cfu/ml

Choose the correct answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (C) and (D) only
- (4) (E) only

**Options :**

19088950225. 1

19088950226. 2

19088950227. 3

19088950228. 4

**Question Number : 83 Question Id : 19088912584 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Poor plant sanitation is a major factor responsible for microbiological defects in Sweetened Condensed Milk (SCM).

Statement II : Molds are heat sensitive and will not survive under forewarming temperature given to milk during the manufacturing of SCM.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088950229. 1

19088950230. 2

19088950231. 3

19088950232. 4

**Question Number : 84 Question Id : 19088912585 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Control of entry of Birds in spray drying plants is very important.

Reason (R) : Faecal dropping of Birds in spray drying plant is one of the important source of Salmonella contamination in Milk Powder.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088950233. 1

19088950234. 2

19088950235. 3

19088950236. 4

**Question Number : 85 Question Id : 19088912586 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following bacteria produces Diplococcin?

- (1) *Lactococcus lactis* subsp. *lactis*
- (2) *Lactococcus lactis* subsp. *cremoris*
- (3) *Lactococcus lactis* subsp. *diacetylactis*
- (4) *Lactobacillus helveticus*

**Options :**

19088950237. 1

19088950238. 2

19088950239. 3

19088950240. 4

**Question Number : 86 Question Id : 19088912587 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following statements are correct in the case of Benzoate as a preservative in Foods?

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| (1) Effective at neutral pH       | (2) Effective at alkaline pH       |
| (3) Effective at acidic pH values | (4) Effective in presence of salts |

**Options :**

19088950241. 1

19088950242. 2

19088950243. 3

19088950244. 4

**Question Number : 87 Question Id : 19088912588 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : The time in minutes required to kill or destroy 90% of the organisms are known as D-value.

Statement II : The value equivalent to time, in minutes at 250°F, with respect to its capacity to destroy spores or vegetative cells of a particular organisms are denoted by 'Z' value.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088950245. 1

19088950246. 2

19088950247. 3

19088950248. 4

**Question Number : 88 Question Id : 19088912589 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Match List I with List II

List I	List II
(A) Lactococcin	(I) <i>Lactococcus lactis</i> ssp <i>lactis</i>
(B) Nisin	(II) <i>Leuconostoc mesenteroides</i>
(C) Diplococcin	(III) <i>Lactococcus lactis</i> spp <i>diacetylactis</i>
(D) Mesenterocin	(IV) <i>Lactococcus lactis</i> spp <i>cremoris</i>

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

**Options :**

19088950249. 1

19088950250. 2

19088950251. 3

19088950252. 4

**Question Number : 89 Question Id : 19088912590 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following are known to be a Antimicrobial bioactive peptide?

- (1) Casomorphin and  $\alpha$ -Lactorphin
- (2) Casokinins and Lactokinins
- (3) Lactoferricin B and Casoplatenins
- (4) Lactoferricin B and Isracidin

**Options :**

19088950253. 1

19088950254. 2

19088950255. 3

19088950256. 4

**Question Number : 90 Question Id : 19088912591 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Intermediate moisture foods are characterized by

- (A) Moisture content of around 15-50%.
- (B)  $a_w$  between 0.6 and 0.85.
- (C) They are not shelf stable at room temperature.
- (D) Staphylococcus aureus is the important and major pathogenic organism.
- (E) Produced by desorption.

Choose the correct answer from the options given below :

- (1) (A), (B) and (C)
- (2) (A), (B) and (D)
- (3) (C), (D) and (E)
- (4) (A), (C) and (E)

**Options :**

19088950257. 1

19088950258. 2

19088950259. 3

19088950260. 4

**Question Number : 91 Question Id : 19088912592 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Antibiotic responsible for Antimicrobial resistance in Listeria monocytogenes is oxacillin leads to Methicillin Resistance.

Statement II : In case of Enterococcus faecalis, vancomycin resistance is predominant and is a food safety concern in Dairy Sector.

In the light of the above statements, choose the *correct* answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088950261. 1

19088950262. 2

19088950263. 3

19088950264. 4

**Question Number : 92 Question Id : 19088912593 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following Lactobacillus species are grouped under facultative heterofermentative types?

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| (1) <u>Lactobacillus bulgaricus</u> | (2) <u>Lactobacillus acidophilus</u> |
| (3) <u>Lactobacillus gasseri</u>    | (4) <u>Lactobacillus casei</u>       |

**Options :**

19088950265. 1

19088950266. 2

19088950267. 3

19088950268. 4

**Question Number : 93 Question Id : 19088912594 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Important characteristic of Bifidobacterium species is the production of lactate and acetate from glucose. What is the ratio of lactate and acetate produced by them?

- (1) 1 lactate : 1 acetate                      (2) 2 lactate : 2 acetate  
(3) 2 lactate : 3 acetate                      (4) 3 lactate : 2 acetate

**Options :**

19088950269. 1

19088950270. 2

19088950271. 3

19088950272. 4

**Question Number : 94 Question Id : 19088912595 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Sequence of handling of following liquid starter culture in Dairy is

- (A) Bulk cultures  
(B) Stock cultures  
(C) Mother cultures  
(D) Feeder or Intermediate  
(E) Baby culture

Choose the correct answer from the options given below :

- (1) (A), (B), (C) and (D)  
(2) (B), (C), (D) and (E)  
(3) (B), (C), (D) and (A)  
(4) (A), (D), (C) and (A)

**Options :**

19088950273. 1

19088950274. 2

19088950275. 3

19088950276. 4

**Question Number : 95 Question Id : 19088912596 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I

- (A) Acidophilus milk
- (B) Kefir
- (C) Koumiss
- (D) Villi

List II

- (I) *Saccharomyces kefir*
- (II) *Lactobacillus delbrueckii*
- (III) *Lactococcus lactis ssp lactis*
- (IV) *Lactobacillus acidophilus*

Choose the correct answer from the options given below :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (3) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)
- (4) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

**Options :**

19088950277. 1

19088950278. 2

19088950279. 3

19088950280. 4

**Question Number : 96 Question Id : 19088912597 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Mastitis milk cannot be used for the propagation of starter culture due to leucocytes in this milk can absorb the culture results in inactivation/phagocytosis.

Statement II : Lipolysed milk containing free fatty acids (100 mg/L) do not inhibit the starter culture activity.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088950281. 1

19088950282. 2

19088950283. 3

19088950284. 4

**Question Number : 97 Question Id : 19088912598 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Minimum effective dose for probiotics confer the health benefits is

- |                |                   |
|----------------|-------------------|
| (1) $10^5$ cfu | (2) $10^6$ cfu    |
| (3) $10^9$ cfu | (4) $10^{12}$ cfu |

**Options :**

19088950285. 1

19088950286. 2

19088950287. 3

19088950288. 4

**Question Number : 98 Question Id : 19088912599 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I

- (A) *Lactobacillus acidophilus*
- (B) *Lactobacillus casei*
- (C) *Lactobacillus reuterii*
- (D) *Bifidobacterium bifidum*

List II

- (I) Broad spectrum antimicrobial
- (II) Deconjugation of Bile Salts
- (III) Anticarcinogenic
- (IV) Calcium absorption

Choose the correct answer from the options given below :

- (1) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (2) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (3) (A)-(III), (B)-(IV), (C)-(II), (D)-(I)
- (4) (A)-(IV), (B)-(II), (C)-(I), (D)-(III)

**Options :**

19088950289. 1

19088950290. 2

19088950291. 3

19088950292. 4

**Question Number : 99 Question Id : 19088912600 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

An Adenine always paired with

- (1) Cytosine
- (2) Guanine
- (3) Thymine
- (4) Adenine

**Options :**

19088950293. 1

19088950294. 2

19088950295. 3

19088950296. 4

**Question Number : 100 Question Id : 19088912601 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

According to the distance between two nitrogen bases on a single strand of DNA molecule

- |           |            |
|-----------|------------|
| (1) 34 Å  | (2) 3.4 Å  |
| (3) 34 nm | (4) 3.4 nm |

**Options :**

19088950297. 1

19088950298. 2

19088950299. 3

19088950300. 4

**Question Number : 101 Question Id : 19088912602 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I

- (A) DNA ligase
- (B) DNA primase
- (C) Polymerase I
- (D) Polymerase III

List II

- (I) Synthesis of RNA primes
- (II) Removal of RNA primes
- (III) Joining DNA fragment together
- (IV) Catalyses the most of the DNA synthesis

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
- (4) (A)-(IV), (B)-(I), (C)-(II), (D)-(III)

**Options :**

19088950301. 1

19088950302. 2

19088950303. 3



19088950304. 4

**Question Number : 102 Question Id : 19088912603 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The following are the functions of 'Dna B' protein in DNA replication

- (A) Initiation of DNA replication.
- (B) Binding the origin of replication.
- (C) Breaks hydrogen bonds holding two strands of double helix together.
- (D) Promotes DNA primase activity.
- (E) Involved in primosome assembly.

Choose the correct answer from the options given below :

- (1) (A) and (B)
- (2) (A), (B) and (C)
- (3) (B), (C) and (D)
- (4) (C), (D) and (E)

**Options :**

19088950305. 1

19088950306. 2

19088950307. 3

19088950308. 4

**Question Number : 103 Question Id : 19088912604 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Recombinational repair corrects the damaged DNA in which both bases of a pair are missing or damaged.

Reason (R) : In this type of repair protein 'Rec B' cuts a piece of template DNA from a sister molecule and puts it into the gap.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088950309. 1

19088950310. 2

19088950311. 3

19088950312. 4

**Question Number : 104 Question Id : 19088912605 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

These are steps of PCR Assay

- (A) Denaturation – Heat briefly to separate DNA strands
- (B) Annealing – Cool to allow primers to Hydrogen bonds with ends of target sequence
- (C) Extension – DNA polymerase adds nucleotide to the 3' end of each primer
- (D) Restriction Enzyme Cleavage
- (E) Replica plating on to medium for the growth of Bacteria

Choose the correct answer from the options given below :

- (1) (A) and (B)
- (2) (B) and (C)
- (3) (A), (B) and (C)
- (4) (C), (D) and (E)

**Options :**

19088950313. 1

19088950314. 2

19088950315. 3

19088950316. 4

**Question Number : 105 Question Id : 19088912606 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Following are the Bacteriophage cloning vectors

- (A)  $\lambda$  1059
- (B) EMBL3
- (C) pBR322
- (D) PJC720
- (E) PYAC

Choose the correct answer from the options given below :

- (1) (A) and (B)
- (2) (B) and (C)
- (3) (C) and (D)
- (4) (D) and (E)

**Options :**

19088950317. 1

19088950318. 2

19088950319. 3

19088950320. 4

**Question Number : 106 Question Id : 19088912607 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following sampling plan used for Salmonella identification?

- (1) Three class
- (2) Two class
- (3) Single class
- (4) Four class

**Options :**

19088950321. 1

19088950322. 2

19088950323. 3

19088950324. 4

**Question Number : 107 Question Id : 19088912608 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Pasteurization Guidelines given by regulatory bodies are

- |                           |                                    |
|---------------------------|------------------------------------|
| (1) Mandatory             | (2) Advisory                       |
| (3) Mandatory or Advisory | (4) Neither Mandatory nor Advisory |

**Options :**

19088950325. 1

19088950326. 2

19088950327. 3

19088950328. 4

**Question Number : 108 Question Id : 19088912609 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : A 'Zero tolerance' policy has been adopted for food borne pathogens in India by FSSAI for milk and milk products.

Reason (R) : As a member of World Trade Organisation (WTO) India needs to adopt the standard as per the International requirement to enhance its export of FMGC items.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088950329. 1

19088950330. 2

19088950331. 3

19088950332. 4

**Question Number : 109 Question Id : 19088912610 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The characteristic feature of *Listeria monocytogenes* used in its identification in Dairy Products

- (A) Esculinase Enzyme
- (B) Mannitol fermentation
- (C) Lactose fermentation
- (D) Lecithinase activity

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (A), (B) and (D) only
- (4) (A), (B) and (C) only

**Options :**

19088950333. 1

19088950334. 2

19088950335. 3

19088950336. 4

**Question Number : 110 Question Id : 19088912611 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is a Late lactose fermenter?

- (1) *E.coli*
- (2) *Enterobacter aerogenosa*
- (3) *Serratia amurcurse*
- (4) *Salmonella*

**Options :**

19088950337. 1

19088950338. 2

19088950339. 3

19088950340. 4

**Question Number : 111 Question Id : 19088912612 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Two class sampling plan is used to designate acceptable or unacceptable batch/lot of food.

Statement II : Two class sampling plan is used for safety indicator organisms to interpret its absence or presence in Food item analysed.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088950341. 1

19088950342. 2

19088950343. 3

19088950344. 4

**Question Number : 112 Question Id : 19088912613 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following Biosensor work on the principle of Biomolecular interaction?

- (1) Surface plasmon resonance
- (2) Refractometry
- (3) Piezoelectric
- (4) Diffractometry

**Options :**

19088950345. 1

19088950346. 2

19088950347. 3

19088950348. 4

**Question Number : 113 Question Id : 19088912614 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I

- (A) *E.coli* K-12
- (B) *Listeria monocytogenes*
- (C) *Mycobacterium tuberculosis*
- (D) Ebola virus

List II

- (I) Risk group-IV
- (II) Risk group-III
- (III) Risk group-II
- (IV) Risk group-I

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
- (4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

**Options :**

19088950349. 1

19088950350. 2

19088950351. 3

19088950352. 4



Question Number : 114 Question Id : 19088912615 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

List I

- (A) Sake
- (B) Cider
- (C) Wine
- (D) Tempeh

List II

- (I) *Sacharomyces ellipsoides*
- (II) *Aspergillus oryzae*
- (III) *Acetobacter*
- (IV) *Rhizopus olegosporus*

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)
- (3) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)
- (4) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)

Options :

19088950353. 1

19088950354. 2

19088950355. 3

19088950356. 4

Question Number : 115 Question Id : 19088912616 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Fermented soybean product common in Japan is

- (1) Tempeh
- (2) Miso
- (3) Ogi
- (4) Gari

Options :

19088950357. 1

19088950358. 2

19088950359. 3

19088950360. 4

**Question Number : 116 Question Id : 19088912617 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Fermenting organism used in the preparation of Kefir

- (A) *Streptococcus lactis*
- (B) *Lactobacillus bulgaricus* and *Torula* spp.
- (C) *Lactobacillus acidophilus* and *Torula* spp.
- (D) *Streptococcus thermophilus*

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (A) and (C) only
- (4) (D) only

**Options :**

19088950361. 1

19088950362. 2

19088950363. 3

19088950364. 4

**Question Number : 117 Question Id : 19088912618 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Aflatoxins are carcinogenic and mutagenic in nature which are produced by?

- (A) *Aspergillus niger*
- (B) *Aspergillus flavus*
- (C) *Aspergillus parasiticus*
- (D) *Aspergillus oryzae*

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (C) and (D) only
- (4) (A) and (D) only

**Options :**

19088950365. 1

19088950366. 2

19088950367. 3

19088950368. 4

**Question Number : 118 Question Id : 19088912619 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : Rapid detection methods are need of hour to overcome unnecessary storage of food products.

Reason (R) : Since conventional detection methods are time consuming and product is kept until results of test come out.

In the light of the above statements, choose the *most appropriate answer* from the options given below :

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088950369. 1

19088950370. 2

19088950371. 3

19088950372. 4

**Question Number : 119 Question Id : 19088912620 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following method is working on immunological principle?

- |           |         |
|-----------|---------|
| (1) VIDAS | (2) DMC |
| (3) DEFT  | (4) SPR |

**Options :**

19088950373. 1

19088950374. 2

19088950375. 3

19088950376. 4

**Question Number : 120 Question Id : 19088912621 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following test used for the confirmation of toxigenic *Staphylococcus aureus*?

- (1) Coagulase and DNase test
- (2) Glucuronide and Coagulase test
- (3) Lecithinase and Glucuronide test
- (4) Henry Illumination technique

**Options :**

19088950377. 1

19088950378. 2

19088950379. 3

19088950380. 4