

## PREVIEW QUESTION BANK

Module Name : DAIRY TECHNOLOGY-ENG  
Exam Date : 09-Jul-2023 Batch : 10:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	3501	<p>As per legal standards (FSSR, 2011), the acidity (%LA) of chakka should not be more than :</p> <ol style="list-style-type: none"> <li>1. 1.5s</li> <li>2. 2.5</li> <li>3. 3.5</li> <li>4. 2.0</li> </ol> <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
Objective Question				
2	3502	<p>Which of the following food additive is permitted as preservative in paneer ?</p> <ol style="list-style-type: none"> <li>1. Sodium acetate</li> <li>2. Potassium sorbate</li> <li>3. Potassium acetate</li> <li>4. Nicin</li> </ol> <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
Objective Question				
3	3503		4.0	1.00

Given below are four statements :

**Statement (I) :** Homogenisation breaks down fat globules in milk into smaller entities.

**Statement (II) :** Homogenisation breaks down fat globules and casein micelles in milk into smaller entities.

**Statement (III) :** Homogenisation slightly increases viscosity of milk.

**Statement (IV) :** Homogenisation improves the appearance of milk.

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

1. **Statement (I)** is false, statements **(II)**, **(III)** and **(IV)** are true
2. **Statements (I)** and **(II)** are false, statements **(III)** and **(IV)** are true
3. **Statements (I)**, **(III)** and **(IV)** are true, **Statement (II)** is false
4. **Statement (III)** is false, **Statements (I)**, **(II)** and **(IV)** are true

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

4 3504

With regard to temperature of operation, place the following unit operations in sequence in an increasing order of temperature

(i) Sterilisation (ii) Thermisation (iii) Homogenisation (iv) Bactofugation and (v) HTST pasteurization.

Choose the *correct* answer from the options given below :

1. Sterilisation, HTST pasteurization, Thermisation, Bactofugation, Homogenisation
2. Sterilisation, HTST pasteurization, Homogenisation, Thermisation, Bactofugation
3. Bactofugation, Homogenisation, Thermisation, HTST pasteurization, Sterilisation
4. Bactofugation, HTST pasteurization, Homogenisation, Thermisation, Sterilisation

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

5	3505	<p>“Narampak” and “karapak” refer to varieties of sandesh with reference to which of the following parameters ?</p> <ol style="list-style-type: none"> <li>1. Colour and appearance</li> <li>2. Consistency</li> <li>3. Overall quality</li> <li>4. Springiness</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

## Objective Question

6	3506	<p>In sensory evaluation of dairy products, maximum marks are allotted to which of the following attribute ?</p> <ol style="list-style-type: none"> <li>1. Body and textural attribute</li> <li>2. Flavour attribute</li> <li>3. Appearance attribute</li> <li>4. Integrity of packaging attribute</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

## Objective Question

7	3507	<p>Which chemical groups are responsible for cooked flavour of milk ?</p> <ol style="list-style-type: none"> <li>1. Amine groups</li> <li>2. Sulphydryl groups</li> <li>3. Hydroxygroups</li> <li>4. Reducing moieties</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

8	3508	<p>Which of the following is <u>not</u> used as sterilants for membranes ?</p> <ol style="list-style-type: none"> <li>1. Formaldehyde</li> <li>2. Nitric acid</li> <li>3. Hypochlorite solution</li> <li>4. Sodium metabisulphite solution</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

9	3509	<p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> During paneer manufacture, pressing of coagulum in hot condition is essential.</p> <p><b>Reason (R) :</b> Pressing in hot condition can fuse the coagulum into a firm single block.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>1. Both (A) and (R) are true and (R) is the correct explanation of (A).</li> <li>2. Both (A) and (R) are true but (R) is <b>NOT</b> the correct explanation of (A).</li> <li>3. (A) is true but (R) is false.</li> <li>4. (A) is false but (R) is true.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p>	4.0	1.00
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A4 : 4

Objective Question

10 3510

4.0 1.00

Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Name of Process)</b>	<b>(Temperature/time)</b>
(A) Pasteurization	(I) 60°C / no hold
(B) Sterilisation	(II) 55-60°C / no hold
(C) Homogenisation	(III) 72°C / 15 sec
(D) Bactofugation	(IV) 118°C / 15min

Choose the **correct** answer from the options given below :

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

11 3511

4.0 1.00

Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Name of the cheese)</b>	<b>(Country of origin)</b>
(A) Limburger	(I) Portugal
(B) Queso-Blanco	(II) Germany
(C) Requeijao	(III) Peru
(D) Ziger	(IV) Belgium

Match the name of the cheese with its country of origin :

- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (IV), (B) - (III), (C) - (I), (D) - (II)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

12 3512

Given below are the characteristics of *Breribacterium linens*, a secondary flora of cheese.

- Gram +ve, mesophilic organism, rod-shaped colonies
- Produces a yellow orange carotenoid pigment that colours the surface of cheese, colour production is enhanced by exposure to light.
- It grows best at neutral pH, use lactose or citrate, grows well at high salt concentration.
- Highly proteolytic, degrade whey protein and casein, contribute to flavour production in surface ripened cheese by producing metabolites.

Choose the **correct** options associated with the given bacteria :

- (A), (B) and (C) only.
- (A), (B), (C) and (D)
- (A), (B), and (D).
- (B), (C) and (D) only.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

13 3513

4.0 1.00

Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Quality Control Test)</b>	<b>(Component or Analyte)</b>
(A) Walker Formal	(I) Starter
(B) Horrall and Elliker	(II) Phage
(C) Dye modification test	(III) Antibiotic
(D) Charm test	(IV) Casein

Choose the *correct* component which is associated with the respective analytical test :

- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

14 3514

4.0 1.00

Given below are two statements pertaining to additives that may be used in cheese.

**Statement (I) :** Cheese additives that may be added in any accustomed quantity or as per GMP are sodium chloride, lactic acid, citric acid, whey protein, etc.

**Statement (II) :** Cheese additives having limits of usage are annatto, sorbic acid or its salt, sodium or calcium nitrate, nisin, calcium chloride, etc.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

15 3515

Animals fed with cotton seed meal show higher amount of which of the following fatty acids in ghee from cotton tract area ?

- (A) Caprylic acid
- (B) Caproic acid
- (C) Capric acid
- (D) Lauric acid

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

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

## Objective Question

16	3516	<p>Given below are stages of manufacturing of a blended fat spread.</p> <p>(A) Pasteurization of the dispersion at suitable time and temperature combination, hot filling and storage at refrigerated temperature.</p> <p>(B) Addition of calculated amount of stabilizer, salt, mixing and homogenization.</p> <p>(C) Taking calculated amount of protein source and blending with fat source to form an oil-in -water type emulsion.</p> <p>(D) Addition of flavour of choice and blend to uniformly distribute throughout emulsion.</p> <p>Choose the <i>correct</i> sequence of manufacturing stages from the below given options.</p> <p>1. (B), (C), (D), (A).</p> <p>2. (C), (B), (D), (A).</p> <p>3. (C), (D), (A), (B).</p> <p>4. (B), (D), (C), (A).</p>	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			

## Objective Question

17	3517	<p>Given below are two statements pertaining to chemical analysis of ghee.</p> <p><b>Statement (I) :</b> About 1-2 g molted ghee sample is taken and dissolved in 2-3 ml of hexane followed by addition of colour developing reagent consisting of water, sulphuric acid and nitric acid in the ratio of 20:6:1. The mixture is shaken vigorously and stand undisturbed to separate into two layers.</p> <p><b>Statement (II) :</b> Appearance of distinct orange colour in upper layer indicate presence of mineral oil.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <p>1. Both <b>Statement (I)</b> and <b>Statement (II)</b> are correct.</p> <p>2. Both <b>Statement (I)</b> and <b>Statement (II)</b> are incorrect.</p> <p>3. <b>Statement (I)</b> is correct but <b>Statement (II)</b> is incorrect.</p> <p>4. <b>Statement (I)</b> is incorrect but <b>Statement (II)</b> is correct.</p>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

18	3518	<p>Given below are two statements pertaining to bacteria used in cheese making.</p> <p><b>Statement (I) :</b> Propionibacteria species are Gram +ve rods that cause eye by lactate metabolism in Swiss type of cheese.</p> <p><b>Statement (II) :</b> <i>Leuconostoc mesenteroids</i> subsp. <i>cremoris</i> is Gm +ve cocci produce eye in Gouda and Edam cheese by lactate metabolism.</p> <p>In light of the above statements, choose the <b>most appropriate</b> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both <b>Statement (I)</b> and <b>Statement (II)</b> are correct.</li> <li>Both <b>Statement (I)</b> and <b>Statement (II)</b> are incorrect.</li> <li><b>Statement (I)</b> is incorrect but <b>Statement (II)</b> is correct.</li> <li><b>Statement (I)</b> is correct but <b>Statement (II)</b> is incorrect.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

19	3519		4.0	1.00
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Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Microorganism)</b>	<b>(Butter defect)</b>
(A) <i>Achromobacter putrefaciens</i>	(I) Rancid flavour
(B) <i>Pseudomonas ichthyosmia</i>	(II) Putrefactive taint
(C) <i>Pseudomonas nigrificans</i>	(III) Fishy flavour
(D) <i>Achromobacter lipolyticum</i>	(IV) Black discolouration

Choose the **correct** answer from the options given below :

- (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
- (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

20 3520

In Walker Formal method following observation had been obtained for a given sample of milk

- mL of milk taken: 10
- Burette reading after 1st titration: 2.5
- Burette reading after 2nd titration: 3.4

What is the % total protein and % casein content of the milk sample ?

- % total protein: 1.53 & % casein: 1.206
- % total protein: 1.75 & % casein: 1.5
- % total protein: 2.5 & % casein: 2
- % total protein: 3.125 & % casein: 2.5

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

## Objective Question

21 3521

4.0

1.00

Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Chemical compound)</b>	<b>(Flavour Defect)</b>
(A) Hydrogen sulphide	(I) tallowy
(B) Glycollic acid ester of oleic acid	(II) malty
(C) 3-methyl butanol	(III) fishy
(D) Trimethyl amine	(IV) cooked

Choose the *correct* answer from the options given below :

- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
- (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

22 3522

4.0

1.00

Ricotta is a soft, unripened variety of whey cheese. Ricotta cheese may be considered as a protein co-precipitate having low shelf-life. Probiotic Ricotta cheese was prepared by incorporation of probiotic organism in Ricotta cheese. Ricotta cheese is a good carrier medium of probiotic organism because of high moisture, high pH, low salt and oxygen.

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

**Assertion (A) :** It was observed during the study that survival of probiotic organism in Ricotta cheese matrix is higher as compared to MRS medium during experimental digestion process.

**Reason (R) :** Higher salt content of cheese might be helpful to provide better protection to organism during harsh digestive condition.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

23 3523

4.0 1.00

**Cream neutralization**

Given quantity of cream is 1200 kg with an initial acidity of 0.35% LA. The final desired acidity of cream is 0.15% LA. The available neutralizer is Sodium carbonate.

Determine the amount of neutralizers required for neutralizing the cream.

1. 1.412 kg
2. 2.111 kg
3. 0.759 kg
4. 4.552 kg

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

24 3524

4.0 1.00

Choose the **correct** statement/statements regarding annatto cheese colour

- (A) The pigment in annatto is norbixin, which in the alkaline extract become bixin
- (B) The colour is composed of tints of yellow and red units, and in cheese it become a protein dye, that is attached to casein
- (C) Bixin is a monomethyl di-carboxylic acid and is directly soluble in vegetable oil
- (D) Annatto colour is extracted using alkali (NaOH/KOH) from the fresh seeds of *Bixa Orellana*
1. (A), (B) and (D) only.
  2. (A), (B) and (C) only.
  3. (B), (C) and (D) only.
  4. (A), (B), (C) and (D).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

25 3525

4.0 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

**Assertion (A) :** Casein curd is precipitated at temperatures between 35 and 38°C.

**Reason (R) :** Curd precipitated at temperature below 35°C has a texture resembling chewing gum, being stringy, lumpy and coarse whereas, curd precipitated at about 43°C is very soft and fine

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

26 3526

4.0 1.00

Given below are two statements regarding manufacturing of sodium caseinate

**Statement (I) :** Very high viscosity of sodium caseinate solutions of moderate concentration, limits the solids content to 40% for spray drying.

**Statement (II) :** Formation of a relatively impervious, jelly-like, viscous coating on the surface of casein particles impedes their dissolution on addition of alkali.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

27 3527

4.0 1.00

Given below are the statements related to the manufacturing of whey powder :

- (A) In the spray drier, it is possible to dry whey concentrate having around 60% TS, provided the lactose content has been subjected to a crystallization degree of 85-90%.
- (B) Two-stage drying allows for gentler handling of the product, thereby reducing product degradation.
- (C) The energy required for drying is about 10 – 15 % higher in two-stage dryer as compared to the single-stage process.
- (D) The cost of whey drying is increased for whey powder by application of two-stage processing.

Choose the **correct** answer from the options given below regarding the manufacturing of whey powder

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

28 3528

4.0 1.00

## Protein hydrolysate

Casein hydrolysate with improved qualities can be manufactured by adding proteolytic enzyme in 10% casein solution at pH 6-7 for five hours at suitable temperature. Hydrolysis can be carried out by single or two stage process.

Given below are two statements based on the above. One is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

**Assertion (A) :** The two stage process is preferred to overcome the problem of bitter taste in casein hydrolysate.

**Reason (R) :** The casein solution is first digested using exopeptidase enzyme having high peptidase activity followed by using endopeptidase enzyme to remove residual bitter peptides and free amino acids.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

### Objective Question

29 3529

4.0 1.00

The following statements are describing the production of vitamins through from fermentation of whey. Choose the **correct** answer from the options given below:

- (A) Vitamin B12 production by *Propionibacterium shermanii* can be done by using several substrates including cheese whey
- (B) This organism (*P. shermanii*) grows aerobically and produces propionic acid, which accumulates in the medium.
- (C) Most industrial processes for the production of vitamin B12 by *P. shermanii* require neutralization of the accumulated propionic acid to keep the culture growing logarithmically.
- (D) The formation of vitamin take place during the later part of the fermentation after the organism approaches maximum growth.
1. (A), (B), (C) and (D).
  2. (A), (B) and (C) only.
  3. (B), (C) and (D) only.
  4. (A), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

30 3530

The butter obtained from 800 kg cream having 45% fat is 400 kg. What is the over-run of butter ?

1. 20%
2. 25%
3. 11%
4. 15%

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

31 3531

4.0 1.00

The defect, known as “mould buttons” in sweetened condensed milk is caused by :

1. *Aspergillus repens*
2. *Aspergillus niger*
3. *Torulalactis condense*
4. *Mycobacterium tuberculosis*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

32 3532

Presence of which of the following bacteria in sterilized evaporated milk causes, a non-acid curd that develops into a brownish liquid with a bitter taste.

1. *B. megaterium*
2. *Geobacillus stearothermophilus*
3. *Candida* spp.
4. *B. subtilis*

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

33 3533

The cause for higher insolubility index of dried milk can be attributed to :

1. Milk having high antibiotic residues
2. Milk has been stored in chilled condition for 2 days prior to concentration and drying
3. Milk had disturbed salt balance
4. Late lactation milk was pooled with mid lactation milk intended for drying

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

## Objective Question

34	3534	<p>The idea about heat classification of milk powder can be obtained using :</p> <ol style="list-style-type: none"> <li>1. Whey protein nitrogen index</li> <li>2. Protein Digestibility Corrected Amino Acid Score</li> <li>3. Urea number</li> <li>4. Digestible Indispensable Amino Acid Score</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

35	3535	<p>In falling film milk evaporator, the temperature difference between milk and steam should be approximately around :</p> <ol style="list-style-type: none"> <li>1. 2°C</li> <li>2. 8°C</li> <li>3. 40°C</li> <li>4. 100°C</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

36	3536	<p>The HLB number of soy lecithin is :</p> <ol style="list-style-type: none"> <li>1. 3.0</li> <li>2. 3.8</li> <li>3. 7.0</li> <li>4. 11.5</li> </ol> <p>A1 : 1</p>	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

## Objective Question

37 3537

The overrun kept in soft serve ice cream is about :

1. 25%
2. 50%
3. 75%
4. 95%

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

38 3538

Which of the following type of powder does not possess occluded air ?

1. Spray dried
2. Instantized
3. Roller dried
4. Fluid bed dried

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

39 3539

Which of the following fat ingredients will give the most satisfactory quality ice cream (with 10% milk fat) with regard to flavour and body-texture ?

1. Anhydrous milk fat
2. Cream (45% fat)
3. White butter
4. Cultured cream

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

40	3540	<p>The whipping ability of ice cream mix is not dependent on which of the following ?</p> <ol style="list-style-type: none"> <li>1. Rate of sweetening agent</li> <li>2. Total solids in ice cream mix</li> <li>3. Rate of emulsifier addition in mix</li> <li>4. Rate of flavour addition to mix</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

41	3541	<p>Which of the following type of frozen product requires maximum addition of a given stabilizer ?</p> <ol style="list-style-type: none"> <li>1. Frozen yoghurt</li> <li>2. Ices</li> <li>3. Chocolate ice cream</li> <li>4. Pineapple ice cream (Plain)</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

42	3542		4.0	1.00
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Homogenization is not necessary in the preparation of which of the following types of product ?

1. Soft serve ice cream
2. Fruit and nut ice cream
3. Chocolate ice cream
4. Mango dolly ice candy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

43 3543

The freezing point of a normal 'good average' ice cream mix (10% fat, 11% MSNF, 15% sugar) is about :

1. - 1.0°C
2. - 2.5°C
3. - 8.5°C
4. - 18.0°C

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

44 3544

Which of the following constituents of ice cream mix renders 'chew resistance' to ice cream ?

1. Milk fat
2. Vegetable fats
3. Milk solids not fat
4. Alternative polyol sweeteners

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

45	3545	<p>Who among the following introduced the basic principle of preserving unsweetened condensed milk by heat sterilization ?</p> <ol style="list-style-type: none"> <li>1. Gail Borden</li> <li>2. Charles Page</li> <li>3. Nicholas Appert</li> <li>4. John B. Meyenberg</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

46	3546	<p>The heat stability of milk is assessed by plotting the graph of :</p> <ol style="list-style-type: none"> <li>1. Heat coagulation temperature vs. time</li> <li>2. Heat coagulation time vs. temperature</li> <li>3. Heat coagulation time vs. pH</li> <li>4. Heat coagulation time vs. redox potential</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

47	3547		4.0	1.00
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Which of the following is the system that relies on process controls to minimize food safety risks in the dairy processing industry ?

1. Hazard analysis and critical control point
2. Enterprise Resource Planning
3. Transactions Allowed in a Linear Line Yards
4. Supervisor control and digital analogue

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 3548

Which of the following is a correct abbreviation for SCADA ?

1. Supervisor control and digital analogue
2. Supervisory control and data acquisition
3. Short chain acid distillation acquisition
4. Short chain amino acid digital analogue

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

49 3549

Which of the following is a correct abbreviation for OPRP ?

1. Open plant regular programme
2. Old process regular preventive maintenance
3. Operational prerequisite programme
4. Operation and process regular programme

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

## Objective Question

50	3550	<p>The optimum temperature for the mass crystallization during sweetened condensed milk manufacturing varies mainly with the ratio of :</p> <ol style="list-style-type: none"> <li>1. Lactose to water in the condensed milk</li> <li>2. Water to protein in the condensed milk</li> <li>3. Lactose to protein in the condensed milk</li> <li>4. Fat to lactose in the condensed milk</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

51	3551	<p>Which of the following packaging forms is referred to as a "3D packaging and food service article that is manufactured from an aqueous slurry of cellulosic fibres and formed into discrete products on screened moulds" ?</p> <ol style="list-style-type: none"> <li>1. Folding carton</li> <li>2. Beverage carton</li> <li>3. Vegetable parchment</li> <li>4. Moulded pulp</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

52	3552	<p>Which of the following packaging material with a thickness of about 0.2 millimeter is best suited for blister packaging ?</p> <ol style="list-style-type: none"> <li>1. Linear low-density polyethylene</li> <li>2. High-density polyethylene</li> <li>3. Polyvinyl chloride</li> <li>4. Polyvinylidene chloride</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

53	3553	<p>According to the Food Safety and Standards (Food Products Standards and Food Additives) Regulation (2011), what are the minimum and maximum dosages of radiation processing for sterilization of packaging materials ?</p> <ol style="list-style-type: none"><li>1. 10 kGy and 25 kGy</li><li>2. 5 kGy and 10 kGy</li><li>3. 0.25 kGy and 1.0 kGy</li><li>4. 1.0 kGy and 5.0 kGy</li></ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

54	3554		4.0	1.00
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Match **List-I** with **List-II**

<b>List-I</b>	<b>List-II</b>
<b>(Polymeric material for Packaging)</b>	<b>(Relative ratio of permeability of CO<sub>2</sub> to O<sub>2</sub>)</b> $\left(\frac{P_{CO_2}}{P_{O_2}}\right)$
(A) Low-density Polyethylene	(I) 6.4
(B) Silicon rubber	(II) 2.9
(C) Cast Polypropylene	(III) 4.6
(D) High-density Polyethylene	(IV) 3.3

Choose the *correct* answer from the options given below :

- (A) - (II), (B) - (IV), (C) - (I), (D) - (III)
- (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
- (A) - (I), (B) - (III), (C) - (IV), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

55 3555

What is the ideal transmittance of incident light at 500 nm for packaging materials used for liquid milk ?

- Not more than 2%
- Not more than 8%
- Not more than 5%
- Not more than 11%

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

56	3556	<p>According to the Bureau of Indian Standards (IS: 9845, 2016R), what is the maximum permissible limit of global migration from food contact materials for packaging applications ?</p> <ol style="list-style-type: none"><li>1. 10 mg/dm<sup>2</sup></li><li>2. 60 mg/dm<sup>2</sup></li><li>3. 75 mg/dm<sup>2</sup></li><li>4. 42 mg/dm<sup>2</sup></li></ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

57	3557	<p>Which of the following is referred to as "primrosing" ?</p> <ol style="list-style-type: none"><li>1. Pink colour discoloration of butter due to microbial growth</li><li>2. Leakage of nitrogen gas from the headspace of whole milk powder package</li><li>3. Red colour discoloration of liquid milk</li><li>4. Surface desiccation of butter resulting in discoloration of butter</li></ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

58	3558		4.0	1.00
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Read the following statements pertaining to the Food Safety and Standards (Labelling and Display) Regulations (2020).

- (A) Minimum size of each side of the triangle in Non-Vegetarian logo, for a principal display panel area of above 2500 cm<sup>2</sup>, is 8 mm.
- (B) "Date and time of manufacture" shall be declared on packed meals served in airlines/railways/mobile catering units.
- (C) The particulars of the declaration shall be specified in English or Hindi only.
- (D) A label may have "coined", "fanciful", "brand" or "trade name" subject to compliance with Food Safety and Standards (Advertising and Claims) Regulations (2018).

Choose the **correct** answer from the options given below :

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59 3559

Which of the following food contact materials is used as an engineering polymer ?

- 1. Polyester
- 2. Epoxy-resin
- 3. Polystyrene
- 4. Ethylene vinyl alcohol

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

60 3560

4.0 1.00

Which of the following plastic materials is having relatively very high hot tackability ?

1. Low density polyethylene
2. Ethylene vinyl alcohol
3. Polyvinyl chloride
4. Ethylene vinyl acetate

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

61 3561

Indirect UHT treatment can be done using which of the following methods ?

4.0 1.00

1. Injection
2. Heat exchanger
3. Infusion
4. Vacreation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

62 3562

Which of the following value is related to sterilization process ?

4.0 1.00

1. E - value
2. F - value
3. G - value
4. H - value

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

63	3563	<p>Which of the following refers to an induced motion of a material in a specified way usually in a circulatory pattern inside some sort of container or vessel ?</p> <ol style="list-style-type: none"> <li>1. Mixing</li> <li>2. Kneading</li> <li>3. Agitation</li> <li>4. Shearing</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

64	3564	<p>Short-tube vertical evaporators are also known as :</p> <ol style="list-style-type: none"> <li>1. Calandria evaporators</li> <li>2. Plate evaporators</li> <li>3. Compression evaporators</li> <li>4. Direct evaporators</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

65	3565	<p>Scraped surface heat exchangers are designed for the evaporation of which of the following type of products ?</p> <ol style="list-style-type: none"> <li>1. Low density product</li> <li>2. Medium surface tension product</li> <li>3. High viscous product</li> <li>4. Low specific heat product</li> </ol> <p>A1 : 1</p>	4.0	1.00
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A2 : 2

A3 : 3

A4 : 4

## Objective Question

66 3566

The process of coating of a plastic film with aluminium is called as :

1. Lamination
2. Vapour deposition
3. Extrusion coating
4. Injection mouldings

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

67 3567

In mechanical vapour recompression (MVR), vapour compression is accomplished mechanically using :

1. Venturi scrubber
2. Electric motor
3. Pre-heater
4. Cyclone unit

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

68 3568

For roller drying process, milk is first concentrated upto :

1. 18 - 25 % Total solids
2. 28 - 55 % Total solids
3. 38 - 65 % Total solids
4. 48 - 75 % Total solids

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

69	3569	<p>In a spray dryer pressure nozzle atomization, energy is provided by :</p> <ol style="list-style-type: none"> <li>1. High pressure screw pump</li> <li>2. High pressure centrifugal pump</li> <li>3. High pressure diaphragm pump</li> <li>4. High pressure piston pump</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

## Objective Question

70	3570	<p>Which of the following problems is encountered in spray drying due to partial recycling of exhaust air ?</p> <ol style="list-style-type: none"> <li>1. Increased protein levels</li> <li>2. Increased powder solubility levels</li> <li>3. Increased humidity levels</li> <li>4. Increased salt levels</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

## Objective Question

71	3571		4.0	1.00
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In spray dryer, the process of forming droplets fine enough to dry quickly, but not so fine to escape with the outlet air after having been dried is known as :

1. Droplet size distribution
2. Atomization
3. Change in state
4. Vacuole formation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

72	3572	<p>The capacity of a medium sized dairy plant ranges :</p> <ol style="list-style-type: none"> <li>1. From 200 to 1000 litres</li> <li>2. From 2000 to 10000 litres</li> <li>3. From 20000 to 100000 litres</li> <li>4. From 200000 to 1000000 litres</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

## Objective Question

73	3573	<p>Approximately to what percentage of total electrical load does a refrigeration plant contributes ?</p> <ol style="list-style-type: none"> <li>1. 10 to 20%</li> <li>2. 20 to 30%</li> <li>3. 30 to 40%</li> <li>4. 40 to 50%</li> </ol>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		

A4 : 4

## Objective Question

74	3574	<p>For a spray drying plant, which of the following design layout is most suitable ?</p> <ol style="list-style-type: none"> <li>1. Zero level</li> <li>2. Single level</li> <li>3. Two level</li> <li>4. Multi level</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

75	3575	<p>Which of the following is not a desirable characteristic of a database system ?</p> <ol style="list-style-type: none"> <li>1. Minimum cost</li> <li>2. Maximum redundancy</li> <li>3. Search capability</li> <li>4. Data integrity</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

76	3576	<p>Which of the following is a unit of viscosity ?</p> <ol style="list-style-type: none"> <li>1. N.s/m</li> <li>2. N.s/m<sup>2</sup></li> <li>3. N/s</li> <li>4. N.m.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p>	4.0	1.00
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A3 : 3

A4 : 4

## Objective Question

77	3577	<p>Which of the following fluids have a linear relationship between shear stress and velocity gradient ?</p> <ol style="list-style-type: none"> <li>1. Newtonian fluids</li> <li>2. Non-Newtonian fluids</li> <li>3. Plastic fluids</li> <li>4. Ideal fluid</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

78	3578	<p>Which of the following does not work on the principle of Bernoulli's equation ?</p> <ol style="list-style-type: none"> <li>1. Orificemeter</li> <li>2. Venturimeter</li> <li>3. Pitot tube</li> <li>4. Bourdon tube</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

79	3579	<p>Which of the following principle states that the intensity of pressure at any point in a liquid at rest is same in all directions ?</p> <ol style="list-style-type: none"> <li>1. Archimedes principle</li> <li>2. Bernoulli's principle</li> <li>3. Pascal law</li> <li>4. Continuity principle</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

80 3580

Which of the following are the most important parts of a centrifugal pump ?

1. Vane and piston
2. Impeller and volute
3. Diaphragm and shaft
4. Gear and vane

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

81 3581

Diffuser is a part of which of the following types of pump ?

1. Piston pump
2. Centrifugal pump
3. Screw pump
4. Gear pump

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

82 3582

4.0 1.00

Which of the following two statements are not true for Positive-Displacement Pumps ?

- (A) Positive-displacement pumps demonstrate high discharge pressures and low flow rates
- (B) The output flow is proportional to pump speed.
- (C) Such pump cannot be used for metering applications
- (D) Relief valve must not be provided to handle Very high head pressures

Choose the *correct* answer from the options given below :

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 3583

Which of the following principle is related to dimensional analysis ?

4.0 1.00

- 1. Casson's Theorem
- 2. Davis's Theorem
- 3. Buckingham's Theorem
- 4. Maxwell's Theorem

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

84 3584

4.0 1.00

Which of the following refrigerant is also called as Freon 22 ?

1. monochloro-monofluoro methane
2. monochloro-difluoro methane
3. dichloro-difluoro methane
4. dichloro-monofluoro methane

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

85 3585

Choose the correct sequence to denote the refrigeration cycle in a domestic refrigerator.

- (A) Evaporator
- (B) Compressor
- (C) Condenser
- (D) Expansion device

Choose the **correct** answer from the options given below :

1. (A), (B), (C), (D)
2. (B), (A), (D), (C)
3. (D), (B), (A), (C)
4. (C), (B), (A), (D)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

86 3586

4.0 1.00

Which of the following type of a condenser is the shell and tube type condenser ?

1. Air cooled condensers
2. Water cooled condensers
3. Natural draft evaporative condenser
4. Mechanical draft evaporative condenser

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

87 3587

Power consumption of a refrigerating machine is determined in terms of which of the following units ?

1. kW
2. kcal
3. kJ
4. Btu

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

88 3588

Which of the following statement is correct for a hermetic type of compressor ?

1. It prevents the leakage of refrigerant
2. Lubrication is complex
3. Increases operating noise considerably
4. Requires external drive motor

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

89	3589	<p>Which of the following device maintains constant level of refrigerant in the evaporator by supplying quantity of liquid refrigerant required to take the load in the evaporator ?</p> <ol style="list-style-type: none"> <li>1. Condenser</li> <li>2. Capillary tube</li> <li>3. Float valve</li> <li>4. Filter</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

90	3590	<p>The difference between the temperature of water entering the cooling tower and temperature of water leaving the cooling tower is known as :</p> <ol style="list-style-type: none"> <li>1. Approach of cooling tower</li> <li>2. Gradient of cooling tower</li> <li>3. Lift of cooling tower</li> <li>4. Range of cooling tower</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

91	3591	<p>The equation for alternating voltage is given by :</p> <ol style="list-style-type: none"> <li>1. <math>e = E_m \cos \omega t</math></li> <li>2. <math>e = E_m \sin \omega t</math></li> <li>3. <math>e = E_m \tan \omega t</math></li> <li>4. <math>e = E_m \operatorname{cosec} \omega t</math></li> </ol> <p>A1 : 1</p> <p>A2 : 2</p>	4.0	1.00
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A3 : 3

A4 : 4

## Objective Question

92	3592	<p>A conductor of length 1.75 metre moves at right angles to a uniform magnetic field of flux density <math>0.5 \text{ Wb/m}^2</math> with a velocity of 60 metre/second. Calculate the e.m.f. induced in it.</p> <ol style="list-style-type: none"> <li>1. 210 V</li> <li>2. 17.5 V</li> <li>3. 68.5 V</li> <li>4. 52.5 V</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

93	3593	<p>Diffusion of water molecules within solid food follows which of the following laws ?</p> <ol style="list-style-type: none"> <li>1. Newtons law</li> <li>2. Kick's law</li> <li>3. Fick's law</li> <li>4. Charles law</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

94	3594	<p>Which type of heat exchanger is generally used for pasteurization of milk ?</p> <ol style="list-style-type: none"> <li>1. Double pipe</li> <li>2. Scraped surface heat exchanger</li> <li>3. U-tube</li> <li>4. Plate Heat Exchanger</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

95	3595	<p>A coil with “I” amperes of current and “R” ohm resistance and “t” is time in second, the heat produced ‘H’ in joules is given by which of the following equation ?</p> <ol style="list-style-type: none"> <li>1. <math>H = I^2Rt</math></li> <li>2. <math>H = I^2R^2t</math></li> <li>3. <math>H = IR^2t</math></li> <li>4. <math>H = I^2R^2/t</math></li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

96	3596	<p>In which of the following materials the resistance decreases with increase in temperature ?</p> <ol style="list-style-type: none"> <li>1. Copper</li> <li>2. Carbon</li> <li>3. Mercury</li> <li>4. Platinum</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

97	3597		4.0	1.00
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A Mollier chart is a plot between which of the following options ?

1. Specific volume and Enthalpy
2. Entropy and Enthalpy
3. Latent heat of evaporation and specific volume
4. Sensible heat and Latent heat

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

98 3598

In a HTST pasteurizer, hot water temperature control is of which of the following types ?

1. Proportional control
2. Proportional and Integral
3. Proportional and Derivative
4. PID control

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

99 3599

Given the “z-value” of a microorganism as 4°C. What will be the reaction quotient ( $Q_{10}$ ) ?

1. 613.23
2. 31.32
3. 316.23
4. 61.23

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

## Objective Question

100	3600	<p>The increase in acidity of a medium will :</p> <ol style="list-style-type: none"> <li>1. Increase the 'D' value</li> <li>2. Reduce the 'D' value</li> <li>3. Increase the 'Z' value</li> <li>4. Reduce the 'Z' value</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

101	3601	<p>The decimal reduction time (D value) depends on which of the following ?</p> <ol style="list-style-type: none"> <li>1. No. of microorganisms present in foods</li> <li>2. Time of heating</li> <li>3. Temperature of heating</li> <li>4. Pressure applied</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

102	3602	<p>The process time required at 115°C for 1 log cycle reduction of a particular microorganism having <math>D_{121} = 3</math> min and <math>z = 15^\circ\text{C}</math> is :</p> <ol style="list-style-type: none"> <li>1. 10.04 min</li> <li>2. 11.94 min</li> <li>3. 17.15 min</li> <li>4. 7.53 min</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p>	4.0	1.00
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A3 : 3

A4 : 4

## Objective Question

103	3603	<p>The conductive heat transfer is guided by which of the following laws ?</p> <ol style="list-style-type: none"> <li>1. Fourier's law</li> <li>2. Stefan's law</li> <li>3. Newton's law</li> <li>4. Rettinger's law</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

104	3604	<p>Which of the following metals is having the highest value of thermal conductivity ?</p> <ol style="list-style-type: none"> <li>1. Copper</li> <li>2. Silver</li> <li>3. Aluminium</li> <li>4. Stainless steel</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

105	3605	<p>Calculate the power required for homogenizer if flow rate is 10,000 lph and homogenizing pressure is 250 bar.</p> <ol style="list-style-type: none"> <li>1. 50 kW</li> <li>2. 56 kW</li> <li>3. 90 kW</li> <li>4. 70 kW</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

106 3606

Which of the following metals is generally used for fabricating homogenizer valve ?

4.0

1.00

1. Stainless steel
2. High carbon steel
3. Stellite
4. Nichrome steel

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

107 3607

The terminal velocity of the fat globule in Stoke's law region is given by which of the following ?

4.0

1.00

1.  $v_t = \frac{gD_p^2(\rho_p - \rho)}{18\mu}$
2.  $v_t = \frac{gD_p^2(\rho_p - \rho)}{24\mu}$
3.  $v_t = \frac{gR_p^2(\rho_p - \rho)}{18\mu}$
4.  $v_t = \frac{gR_p(\rho_p - \rho)}{18\mu}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

108 3608

4.0

1.00

Cycle where heat is supplied at constant volume and rejected at constant pressure is called as :

1. Dual cycle
2. Otto cycle
3. Atkinson cycle
4. Diesel cycle

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

109 3609

The efficiency of a Carnot engine using an ideal gas as the working substance is given by which of the following equation ?

4.0 1.00

1.  $\frac{T_1}{T_1 - T_2}$
2.  $\frac{T_1 - T_2}{T_1}$
3.  $\frac{T_2(T_1 - T_2)}{T_1(T_1 - T_2)}$
4.  $\frac{T_1 T_2}{T_1 - T_2}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

110 3610

The internal energy of an ideal gas is a function of which of the following ?

4.0 1.00

1. Pressure
2. Volume
3. Absolute Temperature
4. Pressure, volume and temperature

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

111 3611

4.0 1.00

## Match List-I with List-II

List-I	List-II
(Laws of thermodynamics)	(Attributes/Properties/Relationship)
(A) Zeroth law of thermodynamics	(I) Internal Energy
(B) First law of thermodynamics	(II) Temperature
(C) Second law of thermodynamics	(III) Absolute zero temperature
(D) Third law of thermodynamics	(IV) Entropy

Choose the *correct* answer from the options given below :

- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
- (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
- (A) - (IV), (B) - (I), (C) - (III), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

112 3612

4.0 1.00

The compression ratios for diesel engines lie in the range of :

- 30 to 40
- 5 to 8
- 15 to 20
- 3 to 6

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

113 3613

The resultant of two forces with a magnitude of  $\frac{a}{4}$  acting at right angle is :

1.  $\frac{a}{2}$
2.  $\frac{a}{2\sqrt{2}}$
3.  $\sqrt{2a}$
4.  $\frac{a}{\sqrt{2}}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

## Objective Question

114 3614

If  $10 \text{ W/m}^2$  heat flux is conducted across a wall of 2 cm thickness having a temperature gradient of  $4 \text{ }^\circ\text{C}$ . What is the thermal conductivity of the wall ?

1.  $2 \times 10^{-1} \text{ Wm}^{-1}\text{K}^{-1}$
2.  $2 \times 10^{-2} \text{ Wm}^{-1}\text{K}^{-1}$
3.  $1 \times 10^{-1} \text{ Wm}^{-1}\text{K}^{-1}$
4.  $1 \times 10^1 \text{ Wm}^{-1}\text{K}^{-1}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

## Objective Question

115 3615

4.0

1.00

Critical thickness of insulation for spheres is given by which of the following relationship ?

1.  $k/h$
2.  $2k/h$
3.  $h/2k$
4.  $4k/h$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

116 3616

A hot metal piece kept in air gets cool from  $90^{\circ}\text{C}$  to  $80^{\circ}\text{C}$  in  $t_1$  seconds, from  $80$  to  $70^{\circ}\text{C}$  in  $t_2$  seconds and from  $70$  to  $60^{\circ}\text{C}$  in  $t_3$  seconds. Under these circumstances, which of the following describes the relationship between  $t_1$ ,  $t_2$  and  $t_3$  ?

1.  $t_1 < t_2 < t_3$
2.  $t_1 > t_2 > t_3$
3.  $t_1 = t_2 = t_3$
4.  $t_1 = t_2 + t_3$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

117 3617

What is the resultant force of two forces of magnitude 3 and 5 N acting at an angle of  $60^{\circ}$  ?

1. 6 N
2. 8 N
3. 7 N
4. 9 N

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

118	3618	<p>Co-efficient of friction is the ratio of :</p> <ol style="list-style-type: none"> <li>Force of friction to reaction between two bodies</li> <li>Force of limiting friction to reaction between two bodies</li> <li>Force of friction to normal reaction between two bodies</li> <li>Force of limiting friction to normal reaction between two bodies</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

119	3619	<p>Which of the following will be the highest internal pressure for heat exchanger for UHT processing ?</p> <ol style="list-style-type: none"> <li>6 - 8 psi</li> <li>2 - 4 bar</li> <li>6 - 8 bar</li> <li>2 - 4 psi</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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## Objective Question

120	3620	<p>Which of the following element is not present in AISI 304 but present in AISI 316 Stainless steel ?</p> <ol style="list-style-type: none"> <li>Chromium</li> <li>Molybdenum</li> <li>Nickel</li> <li>Carbon</li> </ol>	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4