

# Telangana State Council Higher Education

## Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

|                                         |                                        |
|-----------------------------------------|----------------------------------------|
| Question Paper Name :                   | Food Technology 10th June 2024 Shift 2 |
| Subject Name :                          | Food Technology                        |
| Creation Date :                         | 2024-06-11 14:24:50                    |
| Duration :                              | 120                                    |
| Total Marks :                           | 120                                    |
| Display Marks:                          | Yes                                    |
| Share Answer Key With Delivery Engine : | Yes                                    |
| Actual Answer Key :                     | Yes                                    |
| Change Font Color :                     | No                                     |
| Change Background Color :               | No                                     |
| Change Theme :                          | No                                     |
| Help Button :                           | No                                     |
| Show Reports :                          | No                                     |
| Show Progress Bar :                     | No                                     |

## Food Technology

|                          |          |
|--------------------------|----------|
| Group Number :           | 1        |
| Group Id :               | 38382333 |
| Group Maximum Duration : | 0        |
| Group Minimum Duration : | 120      |
| Show Attended Group? :   | No       |
| Edit Attended Group? :   | No       |
| Break time :             | 0        |
| Group Marks :            | 120      |

## Mathematics

|                         |           |
|-------------------------|-----------|
| Section Id :            | 38382397  |
| Section Number :        | 1         |
| Section type :          | Online    |
| Mandatory or Optional : | Mandatory |
| Number of Questions :   | 10        |

Number of Questions to be attempted : 10  
Section Marks : 10  
Maximum Instruction Time : 0  
Sub-Section Number : 1  
Sub-Section Id : 38382397  
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 3838234801 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

If  $P = \begin{pmatrix} 1 & 1 & 1 \\ 0 & 1 & 2 \\ 0 & 0 & 1 \end{pmatrix}$  is the modal matrix of  $A = \begin{pmatrix} 1 & 1 & 0 \\ 0 & 2 & 2 \\ 0 & 0 & 3 \end{pmatrix}$  then the sum of all the

elements of  $P^{-1}AP$  is

Options :

1. ✖ 4

2. ✖ 5

3. ✔ 6

4. ✖ 3

Question Number : 2 Question Id : 3838234802 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

If the system of equations  $kx + y + z = k - 1$ ,  $x + ky + z = k - 1$  and  $x + y + kz = k - 1$

have infinite solutions, then  $k$  is

Options :

1. ✖ 0

2. ✔ 1

3. ✖ 2

4. ✖ 3

Question Number : 3 Question Id : 3838234803 Question Type : MCQ Option Shuffling : Yes

**Display Question Number : Yes**

**Correct Marks : 1**

The value of the integral  $\int_C (2xy - x^2)dx + (x^2 + y^2)dy$  where C is the boundary of the

region enclosed by  $y = x^2$  and  $y^2 = x$  described in the positive sense is

**Options :**

1. ✖  $-2$

2. ✔  $0$

3. ✖  $-1$

4. ✖  $2$

**Question Number : 4 Question Id : 3838234804 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

Let  $f(x) = \log x$ . The number 'C' strictly between  $e^2$  and  $e^3$  such that its reciprocal

is equal to  $\frac{f(e^3) - f(e^2)}{e^3 - e^2}$  is

**Options :**

1. ✖  $(e - 1)$

2. ✖  $(1 - e)$

3. ✖  $(e^2 - 1)$

4. ✔  $(e^3 - e^2)$

**Question Number : 5 Question Id : 3838234805 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The solution of the differential equation  $(D^2 + 2)y = x^2$  is

**Options :**

1. ✖  $C_1 \cos \sqrt{2}x + C_2 \sin \sqrt{2}x$

2. ✓  $C_1 \cos \sqrt{2}x + C_2 \sin \sqrt{2}x + \frac{1}{2}(x^2 - 1)$

3. ✗  $C_1 e^{\sqrt{2}x} + C_2 e^{-\sqrt{2}x} x + \frac{1}{2}(x^2 - 1)$

4. ✗  $C_1 e^{-\sqrt{2}x} + C_2 e^{\sqrt{2}x} x + (x^2 + 1)$

Question Number : 6 Question Id : 3838234806 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

If  $L\{f(t)\} = \frac{1}{s} e^{-1/s}$  then  $L\{e^{-t} f(3t)\} =$

Options :

1. ✓  $\frac{e^{-3/s+1}}{s+1}$

2. ✗  $\frac{e^{-3/s}}{s+1}$

3. ✗  $\frac{e^{-1/s+1}}{s+1}$

4. ✗  $\frac{1}{3} \cdot \frac{e^{-3/s+1}}{s+1}$

Question Number : 7 Question Id : 3838234807 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The table below gives values of the function  $f(x) = \frac{1}{x}$  at 5 points of  $x$ .

|        |   |      |        |         |     |
|--------|---|------|--------|---------|-----|
| $x$    | 1 | 1.25 | 1.5    | 1.75    | 2   |
| $f(x)$ | 1 | 0.8  | 0.6667 | 0.57143 | 0.5 |

The approximate value of  $\int_1^2 \frac{1}{x} dx$  by using Simpson's  $\left(\frac{1}{3}\right)^{rd}$  rule is

Options :

1. ✖ 0.89324

2. ✖ 0.96525

3. ✖ 0.79332

4. ✔ 0.69325

**Question Number : 8 Question Id : 3838234808 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The order of the convergence of bisection method is

**Options :**

1. ✖ 4

2. ✖ 2

3. ✔ 1

4. ✖ 3

**Question Number : 9 Question Id : 3838234809 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

If X is a continuous random variable whose probability density function is given by

$$f(x) = \begin{cases} k(4x - 2x^2), & 0 < x < 2 \\ 0, & \text{otherwise} \end{cases} \text{ then the value of } k \text{ is}$$

**Options :**

1. ✔  $\frac{3}{8}$

2. ✖  $\frac{5}{8}$

3. ✖  $\frac{7}{8}$

4. ✖ 1

Question Number : 10 Question Id : 3838234810 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Correct Marks : 1

A fair coin is tossed three times. Let  $X$  be the number of tails appearing and its distribution is as follows.

|            |       |       |       |       |
|------------|-------|-------|-------|-------|
| $X = x$    | 0     | 1     | 2     | 3     |
| $P(X = x)$ | $1/8$ | $3/8$ | $3/8$ | $1/8$ |

Then the variance of  $X$  is

Options :

1. ✖  $\frac{1}{4}$

2. ✔  $\frac{3}{4}$

3. ✖  $\frac{5}{4}$

4. ✖  $\frac{7}{4}$

## Food Technology

|                                       |           |
|---------------------------------------|-----------|
| Section Id :                          | 38382398  |
| Section Number :                      | 2         |
| Section type :                        | Online    |
| Mandatory or Optional :               | Mandatory |
| Number of Questions :                 | 110       |
| Number of Questions to be attempted : | 110       |
| Section Marks :                       | 110       |
| Maximum Instruction Time :            | 0         |
| Sub-Section Number :                  | 1         |
| Sub-Section Id :                      | 38382398  |
| Question Shuffling Allowed :          | Yes       |

Question Number : 11 Question Id : 3838234811 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following is the primary product of photosynthesis

Options :

1. ✖ Proteins
2. ✖ Lipids
3. ✖ Vitamins
4. ✔ Carbohydrates

Question Number : 12 Question Id : 3838234812 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

A complex group of reactions is

Options :

1. ✖ Caramelization
2. ✖ Amylose
3. ✔ Maillard
4. ✖ Enzymatic

Question Number : 13 Question Id : 3838234813 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

What is the generic name of glycans?

Options :

1. ✔ Polysaccharides
2. ✖ Monosaccharides
3. ✖ Oligosaccharides

4. ✖ Disaccharides

Question Number : 14 Question Id : 3838234814 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Which of the following is an extract from red algae

Options :

1. ✔ Carrageenan

2. ✖ Algin

3. ✖ Agar

4. ✖ Xanthan

Question Number : 15 Question Id : 3838234815 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

\_\_\_\_\_ serve as a fuel molecule in foods

Options :

1. ✖ Proteins

2. ✖ Minerals

3. ✖ Vitamins

4. ✔ Lipids

Question Number : 16 Question Id : 3838234816 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The change that a lipid undergoes leading to an undesirable flavor and odour is known as

Options :

1. ✔ Rancidity

2. ✖ Polymerization

3. ✖ Crystallization

4. ✖ Saturation

Question Number : 17 Question Id : 3838234817 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

\_\_\_\_\_ is an example for visible fats

Options :

1. ✖ Pulses

2. ✖ Milk

3. ✖ Cheese

4. ✔ Butter

Question Number : 18 Question Id : 3838234818 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Percentage of proteins in eggs is

Options :

1. ✖ 14 - 15

2. ✔ 13 - 14

3. ✖ 18 - 20

4. ✖ 10 - 12

Question Number : 19 Question Id : 3838234819 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Chemically Annatto pigments belongs to \_\_\_\_\_ group

Options :

1. ✓ Carotenoids
2. ✗ Flavanoids
3. ✗ Heme Pigment
4. ✗ Pheols

Question Number : 20 Question Id : 3838234820 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

\_\_\_\_\_ process is involved in the manufacture of cheese

Options :

1. ✗ Lipoxygenases
2. ✓ Lipases
3. ✗ Ascorbic oxidases
4. ✗ Peroxidases

Question Number : 21 Question Id : 3838234821 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The percentage of minerals in human body is

Options :

1. ✓ 24
2. ✗ 30
3. ✗ 28
4. ✗ 32

Question Number : 22 Question Id : 3838234822 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Which of the following is the most abundant mineral in the human body?

**Options :**

1. ✖ Mg
2. ✔ Ca
3. ✖ K
4. ✖ Na

**Question Number : 23 Question Id : 3838234823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Depending on the climate, the daily intake of sodium chloride in adults vary within the range of

**Options :**

1. ✖ 10 to 20 g
2. ✖ 10 to 24 g
3. ✔ 16 to 24 g
4. ✖ 15 to 20 g

**Question Number : 24 Question Id : 3838234824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Glucose is stored in animals in the form of \_\_\_\_\_

**Options :**

1. ✔ Glycogen
2. ✖ Starch
3. ✖ Amyopectin
4. ✖ Waxes

**Question Number : 25 Question Id : 3838234825 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

WHO headquarters is located at

**Options :**

1. ✖ Rome
2. ✔ Geneva
3. ✖ Washington D.C
4. ✖ London

**Question Number : 26 Question Id : 3838234826 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

Cell arrangement of microorganisms fall in

**Options :**

1. ✖ Cultural characteristics
2. ✖ Genetic characteristics
3. ✖ Ecological characteristics
4. ✔ Morphological characteristics

**Question Number : 27 Question Id : 3838234827 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The logarithmic order of death for bacterial population is described by

**Options :**

1. ✖ Decimal reduction time
2. ✔ Death rate curve
3. ✖ Death production curve

4. ✖ Death reduction curve

**Question Number : 28 Question Id : 3838234828 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The parameters of plant and animal tissues that are inherent part of tissues are referred to as

**Options :**

1. ✔ Intrinsic parameters
2. ✖ Antimicrobial parameters
3. ✖ Extrinsic parameters
4. ✖ Biological parameters

**Question Number : 29 Question Id : 3838234829 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The bacteria that grows in both aerobic and anaerobic conditions is termed as

**Options :**

1. ✖ Aerophiles
2. ✔ Facultative anaerobes
3. ✖ Mesophiles
4. ✖ Eosinophiles

**Question Number : 30 Question Id : 3838234830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

A yellow discoloration of vacuum packaged luncheon style meat is caused by

**Options :**

1. ✖ *Pseudomonas mephitica*
2. ✖ *Pseudomonus putrefaciens*

3. ✓ Enterococcus casseliflavus

4. ✗ Lactobacillus

**Question Number : 31 Question Id : 3838234831 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The minimum and maximum temperatures required for the shigella species to grow is

**Options :**

1. ✗ 10 °C and 40 °C

2. ✓ 10 °C and 48 °C

3. ✗ 15 °C and 45 °C

4. ✗ 15 °C and 65 °C

**Question Number : 32 Question Id : 3838234832 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Spoilage of bacteria in butter is known as surface taint and is caused by

**Options :**

1. ✓ Pseudomonas putrefaciens

2. ✗ Cladosporium

3. ✗ Aspergillus

4. ✗ Penicillium

**Question Number : 33 Question Id : 3838234833 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Vinegar is produced by alcoholic fermentation followed by acetic fermentation with

**Options :**

1. ✖ Saccharomyces
2. ✖ Lactic acid bacteria
3. ✔ Acetobacter
4. ✖ Antigens

**Question Number : 34 Question Id : 3838234834 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The microorganisms used for the industrial purpose is

**Options :**

1. ✖ Molds
2. ✖ Bacteria
3. ✔ Yeast
4. ✖ Streptococcus

**Question Number : 35 Question Id : 3838234835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

For preparation of wines, commonly used fermenting organism is

**Options :**

1. ✔ Saccharomyces
2. ✖ Endomycopsis fibliges
3. ✖ Leuconostoc messenteroides
4. ✖ Rizoporus oligosporous

**Question Number : 36 Question Id : 3838234836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

At what temperature, denaturation and coagulation of proteins takes place

**Options :**

1. ✖ 70 °C
2. ✖ 60 °C
3. ✔ 50 °C
4. ✖ 65 °C

**Question Number : 37 Question Id : 3838234837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following is done as premilling treatment to improve the quality of rice

**Options :**

1. ✖ Soaking
2. ✔ Parboiling
3. ✖ Steaming
4. ✖ Single boiling

**Question Number : 38 Question Id : 3838234838 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The main source of proteins in vegetarian diet is

**Options :**

1. ✖ Wheat
2. ✔ Pulses
3. ✖ Vegetables
4. ✖ Rice

Question Number : 39 Question Id : 3838234839 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

What is the moisture content that aids a grain to sprout?

Options :

1. ✖ 40 - 45%
2. ✖ 25 - 30%
3. ✖ 25 - 35%
4. ✔ 30 - 35%

Question Number : 40 Question Id : 3838234840 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

In cereal group, the highest protein percentage is in

Options :

1. ✖ Barley
2. ✔ Wheat
3. ✖ Rice
4. ✖ Buckwheat

Question Number : 41 Question Id : 3838234841 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The major sources of starch is

Options :

1. ✖ Bran
2. ✖ Husk
3. ✔ Endosperm

4. ✖ Germ

Question Number : 42 Question Id : 3838234842 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The principal protein of wheat flour is

Options :

1. ✖ Zein

2. ✔ Gluten

3. ✖ Karfirin

4. ✖ Oryzine

Question Number : 43 Question Id : 3838234843 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Which one of the following has higher fat content?

Options :

1. ✔ Oil seeds

2. ✖ Maize

3. ✖ Millets

4. ✖ Wheat

Question Number : 44 Question Id : 3838234844 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Which among the following is rich source of protein?

Options :

1. ✖ Jowar

2. ✔ Soy

3. ✖ Vegetable

4. ✖ Rice

**Question Number : 45 Question Id : 3838234845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The botanical name for pearl millet is

**Options :**

1. ✖ *Panicum miliaceum*

2. ✖ *Elensine coracana*

3. ✖ *Echinochola crus-galli*

4. ✔ *Pennisetum glaucum*

**Question Number : 46 Question Id : 3838234846 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Boiling point elevation for different solutions can be viewed by using

**Options :**

1. ✖ Moody chart

2. ✖ Steam tables

3. ✔ Duhring plot

4. ✖ Both Moody chart and Steam tables

**Question Number : 47 Question Id : 3838234847 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The total iron contaminants in lemon juices mg/kg as per alimentarius is

**Options :**

1. ✓ 15

2. ✗ 20

3. ✗ 25

4. ✗ 10

**Question Number : 48 Question Id : 3838234848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In case of pure sucrose solutions, only soluble solids can be measured with

**Options :**

1. ✗ Baume

2. ✗ Twaddle hydrometer

3. ✓ Brix

4. ✗ Abbe refractometer

**Question Number : 49 Question Id : 3838234849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Marmalade is prepared from

**Options :**

1. ✗ Apple

2. ✗ Grapes

3. ✓ Citrus

4. ✗ Pomegranate

**Question Number : 50 Question Id : 3838234850 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The specification of benzoic acid in canned products as per FPO

**Options :**

1. ✖ 650 ppm
2. ✔ 600 ppm
3. ✖ 500 ppm
4. ✖ 620 ppm

**Question Number : 51 Question Id : 3838234851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The FPO specifications for total soluble solids in jams is

**Options :**

1. ✔ Not less than 25%
2. ✖ Not less than 30%
3. ✖ More than 25%
4. ✖ More than 50%

**Question Number : 52 Question Id : 3838234852 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Enzymes used for clarification of fruit juice is

**Options :**

1. ✖ Xylanase
2. ✖ Protease
3. ✖ Cellulase
4. ✔ Pectinase

**Question Number : 53 Question Id : 3838234853 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The specific gravity of grape vinegar varies from

**Options :**

1. ✓ 1.0129 to 1.0213
2. ✗ 1.0129 to 1.2136
3. ✗ 1.129 to 1.2130
4. ✗ 1.129 to 1.3215

**Question Number : 54 Question Id : 3838234854 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The head space for canned products, as per FPO, is

**Options :**

1. ✗ More than 1.6 cm
2. ✗ More than 1.8 cm
3. ✓ Not more than 1.6 cm
4. ✗ Not more than 1.8 cm

**Question Number : 55 Question Id : 3838234855 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The caffeine added to carbonated beverages should not exceed

**Options :**

1. ✗ 300 ppm
2. ✗ 250 ppm
3. ✓ 200 ppm

4. ✖ 320 ppm

Question Number : 56 Question Id : 3838234856 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Lean meat is considered as a good source of \_\_\_\_\_

Options :

1. ✖ Calcium

2. ✔ Iron

3. ✖ Protein

4. ✖ Vitamins

Question Number : 57 Question Id : 3838234857 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The basic pigment of fresh meat is

Options :

1. ✖ Hemoglobin

2. ✔ Myoglobin

3. ✖ Albumin

4. ✖ Serum

Question Number : 58 Question Id : 3838234858 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

From consumer perception the important factor of meat quality is

Options :

1. ✔ Tenderness

2. ✖ Maturation
3. ✖ Curing
4. ✖ Appearance

**Question Number : 59 Question Id : 3838234859 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Sweet cure bacon is smoked directly after

**Options :**

1. ✖ Canning
2. ✔ Curing
3. ✖ Pickling
4. ✖ Drying

**Question Number : 60 Question Id : 3838234860 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The cold smoking of meat is usually done at

**Options :**

1. ✔ 32– 38 °C for 15- 18 hr
2. ✖ 32– 40 °C for 18- 20 hr
3. ✖ 32– 42 °C for 15- 18 hr
4. ✖ 32– 35 °C for 16- 18 hr

**Question Number : 61 Question Id : 3838234861 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

At the time of filling, hot sauce temperature should not be less than

**Options :**

1. ✖ 75 °C
2. ✖ 80 °C
3. ✔ 85 °C
4. ✖ 90 °C

**Question Number : 62 Question Id : 3838234862 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In the manufacture of fermented sausages, it contains

**Options :**

1. ✖ 50 to 80% of lean meat
2. ✖ 50 to 60% of lean meat
3. ✖ 50 to 65% of lean meat
4. ✔ 50 to 70% of lean meat

**Question Number : 63 Question Id : 3838234863 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

An important ingredient used in the preparation of fermented meat sausage is

**Options :**

1. ✖ Protein
2. ✔ Fat
3. ✖ Bones
4. ✖ Muscle

**Question Number : 64 Question Id : 3838234864 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The essential structure unit of all muscles is

**Options :**

1. ✓ Fibre
2. ✗ Serum
3. ✗ Blood
4. ✗ Cellulose

**Question Number : 65 Question Id : 3838234865 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The proportion of iron present in a soluble haem decreases from 65 to 22% when it is

**Options :**

1. ✓ Cooked at 60 °C
2. ✗ Cooked at 70 °C
3. ✗ Cooked at 90 °C
4. ✗ Cooked at 40 °C

**Question Number : 66 Question Id : 3838234866 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The principal function of lactose is to supply

**Options :**

1. ✗ Proteins
2. ✓ Energy
3. ✗ Vitamins
4. ✗ Minerals

**Question Number : 67 Question Id : 3838234867 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following exists only in milk in the form of calcium caseinate phosphate complex?

**Options :**

1. ✘ Albumin
2. ✔ Casein
3. ✘ Glycerides
4. ✘ Niacin

**Question Number : 68 Question Id : 3838234868 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The titratable acidity value of buffalo milk varies from

**Options :**

1. ✘ 0.15 to 0.17
2. ✘ 0.13 to 0.14
3. ✔ 0.14 to 0.15
4. ✘ 0.20 to 0.25

**Question Number : 69 Question Id : 3838234869 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

For normal and fresh sweet cow milk, the pH value usually varies between

**Options :**

1. ✔ 6.4 to 6.6
2. ✘ 6.7 to 6.8

3. ✖ 6.9 to 7.2

4. ✖ 6.3 to 6.5

**Question Number : 70 Question Id : 3838234870 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Higher pH values for fresh milk indicates

**Options :**

1. ✖ Fungal infection

2. ✔ Mastitis

3. ✖ Viral infection

4. ✖ Molds infections

**Question Number : 71 Question Id : 3838234871 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Pycnometer is used to determine

**Options :**

1. ✖ pH

2. ✖ Acidity

3. ✔ Density & Specific gravity

4. ✖ Milk fat

**Question Number : 72 Question Id : 3838234872 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Isoelectric point of casein pH is

**Options :**

1. ✖ 4.3

2. ✔ 4.6

3. ✖ 5.3

4. ✖ 5.6

**Question Number : 73 Question Id : 3838234873 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In bottle pasteurization, raw milk is heated to

**Options :**

1. ✖ 60- 63 °C for 30 seconds

2. ✔ 63-66 °C for 30 minutes

3. ✖ 65-70 °C for 30 seconds

4. ✖ 68-75 °C for 30 minutes

**Question Number : 74 Question Id : 3838234874 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

As per PFA rules of 1976, the standard milk should contain

**Options :**

1. ✔ 4.5% fat & 8.5 % SNF

2. ✖ 4.0% fat & 9.0 % SNF

3. ✖ 3.5% fat & 8.5 % SNF

4. ✖ 3.5% fat & 9.0 % SNF

**Question Number : 75 Question Id : 3838234875 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The Yeasty flavor in cream is due to

**Options :**

1. ✖ Using dirty utensils
2. ✖ Growth of proteolytic bacteria in cream
3. ✖ Lipase activity
4. ✔ Growth of lactose fermenting yeast

**Question Number : 76 Question Id : 3838234876 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In food industry, the maximum waste streams can be monitored by

**Options :**

1. ✖ Waste removal
2. ✔ Reuse or recycling
3. ✖ Biological removing
4. ✖ Chemical decomposition

**Question Number : 77 Question Id : 3838234877 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following is a practical process for reducing pollution and receiving by-product from food processing waste water.

**Options :**

1. ✖ Softening
2. ✖ Ion exchange
3. ✖ Neutralization
4. ✔ Coagulation

**Question Number : 78 Question Id : 3838234878 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The major technology that is used to reduce environmental pollution by waste or waste water discharges from food industry is

**Options :**

1. ✖ Coagulation
2. ✔ Separation
3. ✖ Crystallization
4. ✖ Sedimentation

**Question Number : 79 Question Id : 3838234879 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The consumption and discharge of water by food industries in meat processing is minimized by

**Options :**

1. ✔ Water reuse
2. ✖ Less water usage
3. ✖ More water usage
4. ✖ No water usage

**Question Number : 80 Question Id : 3838234880 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Dairy equipment is regularly cleaned using

**Options :**

1. ✔ Cleaning with detergent

2. ✖ Rinse cleaning with water
3. ✖ Water pressure cleaning
4. ✖ Clean in place

**Question Number : 81 Question Id : 3838234881 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The residence time and temperature for juice extraction are about

**Options :**

1. ✔ 120 – 150 minutes & 24 °C
2. ✖ 130 – 140 minutes & 21 °C
3. ✖ 125 – 150 minutes & 20 °C
4. ✖ 130 – 160 minutes & 25 °C

**Question Number : 82 Question Id : 3838234882 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following is not a desirable characteristic of a manometer fluid?

**Options :**

1. ✖ It should be free from capillary effects
2. ✔ It should have high viscosity
3. ✖ It should have negligible surface tension
4. ✖ It should be non-corrosive

**Question Number : 83 Question Id : 3838234883 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

For a fully developed flow through a pipe, the ratio of the maximum velocity to the average velocity is

**Options :**

1. ✖ 1
2. ✔ 2
3. ✖  $\sqrt{2}$
4. ✖ 4

**Question Number : 84 Question Id : 3838234884 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following pump is kinetic pump?

**Options :**

1. ✔ Centrifugal pump
2. ✖ Rotary pump
3. ✖ Gear pump
4. ✖ Vane pump

**Question Number : 85 Question Id : 3838234885 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In a rotameter as the flow rate increases, the float

**Options :**

1. ✖ Rotates at higher speed
2. ✖ Rotates at lower speed
3. ✔ Rises in the tube
4. ✖ Drops in the tube

**Question Number : 86 Question Id : 3838234886 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The prandtl number is the

**Options :**

1. ✓ Ratio of kinematic viscosity to thermal diffusivity
2. ✗ Ratio of thermal diffusivity to kinematic viscosity
3. ✗ Product of thermal diffusivity and kinematic viscosity
4. ✗ Ratio of absolute viscosity to thermal conductivity

**Question Number : 87 Question Id : 3838234887 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

In forced convection, fluid moves under the influence of

**Options :**

1. ✓ Changes in fluid pressure produced by external work
2. ✗ Buoyant forces arising from changes in density
3. ✗ Elastic forces
4. ✗ Surface tension forces

**Question Number : 88 Question Id : 3838234888 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

Which law states that “the conductive heat flux is linearly proportional to the temperature gradient”

**Options :**

1. ✗ Newton law
2. ✗ Pascal law

3. ✓ Fourier's law

4. ✗ Stefan-Boltzmann Law

Question Number : 89 Question Id : 3838234889 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

Fourier's law of heat conduction gives the heat flow for

Options :

1. ✗ Irregular surfaces

2. ✗ Non-uniform temperature surfaces

3. ✓ One dimensional case only

4. ✗ Two dimensional case only

Question Number : 90 Question Id : 3838234890 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The temperature difference correction factor  $F_T$ , is defined as the

Options :

1. ✗ Ratio of the LMTD to the true temperature

2. ✓ Ratio of the true temperature difference to the LMTD

3. ✗ Difference of the true temperature difference and the LMTD

4. ✗ Arithmetic mean of the true temperature difference and the LMTD

Question Number : 91 Question Id : 3838234891 Question Type : MCQ Option Shuffling : Yes  
Display Question Number : Yes

Correct Marks : 1

The ratio of the increment in surface energy to the total energy imparted to the material during size reduction is called as

Options :

1. ✖ Mechanical efficiency
2. ✔ Crushing efficiency
3. ✖ Energy efficiency
4. ✖ Work efficiency

**Question Number : 92 Question Id : 3838234892 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

In homogenization, size reduction is achieved by the action of

**Options :**

1. ✖ Compression forces
2. ✖ Impact forces
3. ✖ Attrition forces
4. ✔ Shear forces

**Question Number : 93 Question Id : 3838234893 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Driving force in case of filtration by a centrifuge is the

**Options :**

1. ✖ Speed of the centrifuge
2. ✔ Centrifugal pressure exerted by the liquid
3. ✖ Narrow diameter of the vessel
4. ✖ Formation of highly porous cake

**Question Number : 94 Question Id : 3838234894 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

A gravity decanter is meant for the separation of two

**Options :**

1. ✖ Immiscible liquids of same densities
2. ✖ Miscible liquids of same densities
3. ✔ Immiscible liquids of different densities
4. ✖ Miscible liquids of different densities

**Question Number : 95 Question Id : 3838234895 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

Nutrient agar gels at

**Options :**

1. ✔ 35 °C – 40 °C
2. ✖ 80 °C – 90 °C
3. ✖ 105 °C – 110 °C
4. ✖ 95 °C – 100 °C

**Question Number : 96 Question Id : 3838234896 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

How is steam economy calculated in an evaporation operation?

**Options :**

1. ✔ Mass of evaporated liquid/ Mass of heating steam
2. ✖ Mass of evaporated liquid + Mass of heating steam
3. ✖ Mass of evaporated liquid x Mass of heating steam
4. ✖ Mass of heating steam/ Mass of evaporated liquid

Question Number : 97 Question Id : 3838234897 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The formula  $\frac{P}{n^3 D_a^5 \rho}$  denotes which of the following number in impeller problems?

Options :

1. ✖ Weber number
2. ✖ Froude number
3. ✔ Power number
4. ✖ Euler number

Question Number : 98 Question Id : 3838234898 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

How does temperature affect nucleation?

Options :

1. ✖ When temperature increases the nucleation increases
2. ✔ When temperature increases the nucleation decreases
3. ✖ When temperature increases the nucleation increases and then decreases
4. ✖ Nucleation is not dependent on temperature

Question Number : 99 Question Id : 3838234899 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The maximum quantity of water vapor that air can contain at a given temperature, without phase separation is called as

Options :

1. ✖ Apparent humidity
2. ✖ Absolute humidity

3. ✖ Relative humidity

4. ✔ Saturation humidity

**Question Number : 100 Question Id : 3838234900 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

What happens to the drying rate when it reaches critical moisture content?

**Options :**

1. ✖ It becomes constant

2. ✖ It increases gradually

3. ✔ It starts declining

4. ✖ Drying stops

**Question Number : 101 Question Id : 3838234901 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

FSSAI stands for

**Options :**

1. ✔ Food Safety and Standards Authority of India

2. ✖ Food Safe Security Authorization of India

3. ✖ Food Security and Supply Auditing of India

4. ✖ Food Standards Security Authority of India

**Question Number : 102 Question Id : 3838234902 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Which of the following is a scientific discipline to describe handling, preparing and storage of food to prevent food borne illness

**Options :**

1. ✖ Food quality
2. ✔ Food safety
3. ✖ Food standards
4. ✖ Food poisoning

**Question Number : 103 Question Id : 3838234903 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The requirements for food safety management systems are specified by

**Options :**

1. ✔ ISO-22000
2. ✖ ISO-22004
3. ✖ ISO-22006
4. ✖ ISO-22008

**Question Number : 104 Question Id : 3838234904 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

SSOP stands for

**Options :**

1. ✖ Security Standard Operation Procedure
2. ✖ Safe Standard Operation Procedure
3. ✔ Sanitation Standard Operation Procedure
4. ✖ Safe Security Operation procedure

**Question Number : 105 Question Id : 3838234905 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

Which of the following is a useful tool that can be of great value to increase manufacturing efficiency

**Options :**

1. ✓ Statistical quality control
2. ✗ Quality control
3. ✗ Food safety and quality control
4. ✗ Security and safety control

**Question Number : 106 Question Id : 3838234906 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

FSSAI head office is located at

**Options :**

1. ✗ Bangalore
2. ✓ Delhi
3. ✗ Calcutta
4. ✗ Mumbai

**Question Number : 107 Question Id : 3838234907 Question Type : MCQ Option Shuffling : Yes**

**Display Question Number : Yes**

**Correct Marks : 1**

The quality control and hygienic manufacturing of meat products for domestic consumption is ensured by

**Options :**

1. ✗ FPO
2. ✗ PFA
3. ✓ MFPO

4. ✖ FSSAI

Question Number : 108 Question Id : 3838234908 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

APEDA is established in the year

Options :

1. ✖ 1986

2. ✖ 1947

3. ✔ 1985

4. ✖ 1987

Question Number : 109 Question Id : 3838234909 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Which of the following organization specifies quality system models for quality assurance in production and installation

Options :

1. ✖ ISO-9000

2. ✖ ISO-9001

3. ✖ ISO-9006

4. ✔ ISO-9002

Question Number : 110 Question Id : 3838234910 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The maximum limits of synthetic food colors permitted is

Options :

1. ✔ 100 ppm of final product

- 2. ✖ 200 ppm of final product
- 3. ✖ 150 ppm of final product
- 4. ✖ 180 ppm of final product

**Question Number : 111 Question Id : 3838234911 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Example for Class-II preservative is

**Options :**

- 1. ✖ Sugar
- 2. ✖ Salt
- 3. ✔ Benzoic Acid
- 4. ✖ Honey

**Question Number : 112 Question Id : 3838234912 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

For fruit juices, preservatives added in tin bottles or pouches is limited to

**Options :**

- 1. ✖ 250 ppm
- 2. ✖ 180 ppm
- 3. ✔ 200 ppm
- 4. ✖ 120 ppm

**Question Number : 113 Question Id : 3838234913 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The HACCP system is based on \_\_\_\_\_ principles

**Options :**

1. ✓ 7
2. ✗ 9
3. ✗ 11
4. ✗ 12

**Question Number : 114 Question Id : 3838234914 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Marine Products Exports Development Authority is located at

**Options :**

1. ✗ Bangalore
2. ✓ Kochi
3. ✗ Calcutta
4. ✗ Mumbai

**Question Number : 115 Question Id : 3838234915 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

World Food Safety Day is observed on

**Options :**

1. ✓ June 7
2. ✗ October 16
3. ✗ April 7
4. ✗ March 22

Question Number : 116 Question Id : 3838234916 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

HACCP stands for .....

Options :

1. ✓ Hazard Analysis and Critical Control Point
2. ✗ Hazard And Critical Certification Points
3. ✗ Hazard And Critical Certification Policy
4. ✗ Hazard Analysis and Critical Control Policy

Question Number : 117 Question Id : 3838234917 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

The content of citric acid percentage in orange is about

Options :

1. ✗ 0.32
2. ✗ 0.65
3. ✓ 0.98
4. ✗ 1.33

Question Number : 118 Question Id : 3838234918 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes

Correct Marks : 1

Nutritional labelling was first recommended by

Options :

1. ✓ FDA
2. ✗ AGMARK
3. ✗ FPO
4. ✗ PFA

**Question Number : 119 Question Id : 3838234919 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

Food safety plays an important role in

**Options :**

1. ✘ Food manufacture
2. ✘ Contaminant foods
3. ✘ Food supply
4. ✔ Modern food economics

**Question Number : 120 Question Id : 3838234920 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes**

**Correct Marks : 1**

The most hygienic way of drying hands is by using

**Options :**

1. ✔ A warm air dryer
2. ✘ A hand towels
3. ✘ The dish cloth
4. ✘ The apron