

National Testing Agency

Question Paper Name :	Food Engineering and Technology 18 March 2025 Shift 3
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Food Engineering and Technology

Group Number :	1
Group Id :	3016986
Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300

Food Engineering and Technology

Section Id :	3016986
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	3016986
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 301698376 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which equation is used for atmospheric air-steam mixtures, according to Gibbs Dalton Law _____

1. $p_B = p_a + p_w$

2. $p_w = p_a + p_B$

3. $p_a = p_w + p_B$

4. $p_T = p_a + p_w$

Options :

3016981501. 1
3016981502. 2
3016981503. 3
3016981504. 4

Question Number : 2 Question Id : 301698377 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Bacteria that oxidize ethyl alcohol to acetic acid and cause spoilage in alcoholic beverages belong to the Genus.

1. *Aeromonas*
2. *Acetobacter*
3. *Arthrobacter*
4. *Campylobacter*

Options :

3016981505. 1
3016981506. 2
3016981507. 3
3016981508. 4

Question Number : 3 Question Id : 301698378 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Microorganism, commonly called as bread mold, and is involved in the spoilage of foods like berries, fruits, vegetables, bread, etc. is :

1. *Rhizopus stolonifer*
2. *Thamnidium*
3. *Aspergillus*
4. *Trichothecium*

Options :

3016981509. 1
3016981510. 2
3016981511. 3
3016981512. 4

Question Number : 4 Question Id : 301698379 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Bacteria like Coliform, *Enterococci*, intestinal bacteria, anaerobes and viruses are generally present in

1. Soil
2. Water
3. Animals
4. Sewage

Options :

- 3016981513. 1
- 3016981514. 2
- 3016981515. 3
- 3016981516. 4

Question Number : 5 Question Id : 301698380 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Thamnidium chaetocladioides in meat produces

1. Ropiness
2. Discoloration
3. Phosphorescence
4. Whiskers

Options :

- 3016981517. 1
- 3016981518. 2
- 3016981519. 3
- 3016981520. 4

Question Number : 6 Question Id : 301698381 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Which one of the following process is used for the selection of good quality eggs for storage?

1. Candling
2. Washing
3. Oiling
4. Waxing

Options :

- 3016981521. 1
- 3016981522. 2
- 3016981523. 3
- 3016981524. 4

Question Number : 7 Question Id : 301698382 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Milk fat may be decomposed by various bacteria, yeasts, and molds, the changes that take place in the milk fat are:

- A. Oxidation of the unsaturated fatty acids
- B. Hydrolysis of the butterfat to fatty acids
- C. Alkali production
- D. Combined oxidation and hydrolysis to produce rancidity

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981525. 1
- 3016981526. 2
- 3016981527. 3
- 3016981528. 4

Question Number : 8 Question Id : 301698383 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A 4% commercially available acetic acid is known as _____

- 1. Salt
- 2. Brine
- 3. Tartar
- 4. Vinegar

Options :

- 3016981529. 1
- 3016981530. 2
- 3016981531. 3
- 3016981532. 4

Question Number : 9 Question Id : 301698384 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**
Average composition of Milk

LIST-I (Constituents)		LIST-II Percentage (%)	
A.	Water	I.	5.0
B.	Protein	II.	12.9
C.	Lactose	III.	87
D.	Total solids	IV.	3.3

Choose the most appropriate answer from the options given below:

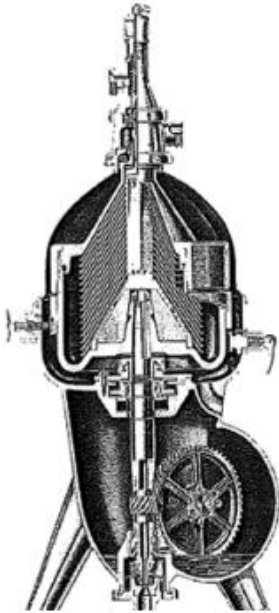
1. A - II, B - I, C - IV, D - III
2. A - I, B - III, C - II, D - IV
3. A - III, B - I, C - IV, D - II
4. A - III, B - IV, C - I, D - II

Options :

3016981533. 1
3016981534. 2
3016981535. 3
3016981536. 4

Question Number : 10 Question Id : 301698385 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Identify the equipment in the image:



1. Homogeniser
2. Clarifier
3. Batch pasteurizer
4. HTST pasteurizer

Options :

- 3016981537. 1
- 3016981538. 2
- 3016981539. 3
- 3016981540. 4

Question Number : 11 Question Id : 301698386 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Pasteurized milk does not contain which of the following enzyme:

1. Plasma lipase
2. Alkaline phosphatase
3. Xanthine oxidase
4. Membrane lipase

Options :

- 3016981541. 1
- 3016981542. 2
- 3016981543. 3
- 3016981544. 4

Question Number : 12 Question Id : 301698387 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Vitamin that is synthesized in the cow's rumen is

1. Vitamin K
2. Vitamin A
3. Vitamin D
4. Vitamin E

Options :

3016981545. 1

3016981546. 2

3016981547. 3

3016981548. 4

Question Number : 13 Question Id : 301698388 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Casein is more resistant to heat than whey. Resistance of casein to heat is **NOT** because of the following which factor.

1. Calcium
2. Magnesium
3. Citrates
4. Nitrates

Options :

3016981549. 1

3016981550. 2

3016981551. 3

3016981552. 4

Question Number : 14 Question Id : 301698389 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Amongst the following, choose a type of concentrated milk

1. Vitamin D milk
2. Condensed milk
3. Soft curd milk
4. Standardized milk

Options :

3016981553. 1

3016981554. 2

3016981555. 3

3016981556. 4

Question Number : 15 Question Id : 301698390 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Sequentially arrange the steps in manufacture of *Roquefort cheese*

- A. Inoculation of *Penicillium roqueforti*
- B. Addition of lactic acid producing starter culture
- C. Hopped and pressed
- D. Formation of firm curd and cutting of curd

Choose the most appropriate answer from the options given below:

1. B, C, A, D

2. B, D, A, C

3. B, A, D, C

4. C, B, D, A

Options :

3016981557. 1

3016981558. 2

3016981559. 3

3016981560. 4

Question Number : 16 Question Id : 301698391 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Among the following, the egg yolk protein is_____

1. Livetin

2. Ovalbumin

3. Avidin

4. Conalbumin

Options :

3016981561. 1

3016981562. 2

3016981563. 3

3016981564. 4

Question Number : 17 Question Id : 301698392 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

During production of egg powder, browning can be prevented by:

- A. Glucose oxidase
- B. Yeast
- C. Lactic acid bacteria
- D. Syruping

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981565. 1
- 3016981566. 2
- 3016981567. 3
- 3016981568. 4

Question Number : 18 Question Id : 301698393 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Ingredient added in egg proteins to decrease the temperature of coagulation is:

- 1. Water
- 2. Lemon juice
- 3. Sugar
- 4. Milk

Options :

- 3016981569. 1
- 3016981570. 2
- 3016981571. 3
- 3016981572. 4

Question Number : 19 Question Id : 301698394 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Among the following, which one is the perennial vegetable?

- 1. Artichoke
- 2. Celery
- 3. Knol-khol
- 4. Leek

Options :

- 3016981573. 1
- 3016981574. 2
- 3016981575. 3
- 3016981576. 4

Question Number : 20 Question Id : 301698395 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Activity of which enzyme increases during germination of cereals?

- 1. Protease
- 2. Lipase
- 3. Oxidoreductase
- 4. β -amylase

Options :

- 3016981577. 1
- 3016981578. 2
- 3016981579. 3
- 3016981580. 4

Question Number : 21 Question Id : 301698396 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Deterioration in cereals is attributed to

- A. Moisture content
- B. Temperature
- C. pH
- D. Presence of oxygen

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981581. 1
- 3016981582. 2
- 3016981583. 3
- 3016981584. 4

Question Number : 22 Question Id : 301698397 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the steps of *modern wheat milling*

- A. Cleaning to remove various type of impurities
- B. Separation of the endosperm from the bran and germ
- C. Dry scouring
- D. Conditioning

Choose the most appropriate answer from the options given below:

- 1. A, D, C, B
- 2. A, C, D, B
- 3. A, B, D, C
- 4. C, B, D, A

Options :

- 3016981585. 1
- 3016981586. 2
- 3016981587. 3
- 3016981588. 4

Question Number : 23 Question Id : 301698398 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Storing the freshly milled flour for 1-2 months result in desirable changes known as maturation. The changes that take place are:

- A. Hydrolysis of fat into fatty acids
- B. Decrease in sulphydryl groups
- C. Reduction of disulphide bonds
- D. Increase in sulphydryl groups

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981589. 1
- 3016981590. 2
- 3016981591. 3
- 3016981592. 4

Question Number : 24 Question Id : 301698399 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Parboiling of rice offers the following advantages:

- A. Greater resistance to insects and fungus infection
- B. Grain becomes weak
- C. Increase in nutritive value of rice
- D. Dehusking of parboiled rice is easy

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981593. 1
- 3016981594. 2
- 3016981595. 3
- 3016981596. 4

Question Number : 25 Question Id : 301698400 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Solvent used in polishing of brown rice during solvent extraction milling is

- 1. Ether
- 2. Hexane
- 3. Toluene
- 4. Methylene

Options :

- 3016981597. 1
- 3016981598. 2
- 3016981599. 3
- 3016981600. 4

Question Number : 26 Question Id : 301698401 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The temperature at which the granules begin to swell rapidly and lose birefringence is called

1. Oxidation
2. Reduction
3. Gelatinization
4. Freezing

Options :

3016981601. 1
3016981602. 2
3016981603. 3
3016981604. 4

Question Number : 27 Question Id : 301698402 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the LIST-I with LIST-II

LIST-I (Saturated fatty acids found in food lipids)		LIST-II (Structure)	
A	Heptanoic	I	$\text{CH}_3 (\text{CH}_2)_4 \text{COOH}$
B	Hexanoic	II	$\text{CH}_3 (\text{CH}_2)_2 \text{COOH}$
C	Pentanoic	III	$\text{CH}_3 (\text{CH}_2)_5 \text{COOH}$
D	Tetranic	IV	$\text{CH}_3 (\text{CH}_2)_3 \text{COOH}$

Choose the most appropriate answer from the options given below:

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

Options :

3016981605. 1
3016981606. 2
3016981607. 3
3016981608. 4

Question Number : 28 Question Id : 301698403 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Heating of unsaturated fats and oils, as in frying operations, can produce changes in the color, molecular weight, viscosity or refractive index due to

1. Rancidity
2. Hydrogenation
3. Polymerization
4. Termination

Options :

- 3016981609. 1
- 3016981610. 2
- 3016981611. 3
- 3016981612. 4

Question Number : 29 Question Id : 301698404 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Triple helical structure of protein is also called_____

1. Peptide bond
2. Collagen helix
3. Tropocollagen
4. Tertiary structure

Options :

- 3016981613. 1
- 3016981614. 2
- 3016981615. 3
- 3016981616. 4

Question Number : 30 Question Id : 301698405 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Spirulina, when grown under controlled conditions, should contain _____ protein on dry-weight basis

1. 20 - 30 %
2. 30 - 40 %
3. 50 - 60 %
4. 70 - 80 %

Options :

- 3016981617. 1
- 3016981618. 2
- 3016981619. 3

Question Number : 31 Question Id : 301698406 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the LIST-I with LIST-II

LIST-I (B Complex Vitamin)		LIST-II (Scientific Name)	
A	Vitamin B-1	I	Pyridoxine
B	Vitamin B-2	II	Cobalamin
C	Vitamin B-6	III	Riboflavin
D	Vitamin B-12	IV	Thiamine

Choose the most appropriate answer from the options given below:

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

Options :

3016981621. 1
3016981622. 2
3016981623. 3
3016981624. 4

Question Number : 32 Question Id : 301698407 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In a food processing plant, heating and cooling of foods are conducted in equipment called heat exchangers. Which among the following is **NOT** a type of non contact heat exchanger?

1. Steam infusion
2. Scraped surface
3. Shell and tube
4. Tubular

Options :

3016981625. 1
3016981626. 2
3016981627. 3
3016981628. 4

Question Number : 33 Question Id : 301698408 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Most frequently employed techniques of enzyme inhibition in food are

- A. Heat
- B. Sugar
- C. Variation of pH
- D. Sulphur dioxide

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981629. 1
- 3016981630. 2
- 3016981631. 3
- 3016981632. 4

Question Number : 34 Question Id : 301698409 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

All amino acids have a chiral centre, except

- 1. Lysine
- 2. Arginine
- 3. Histidine
- 4. Glycine

Options :

- 3016981633. 1
- 3016981634. 2
- 3016981635. 3
- 3016981636. 4

Question Number : 35 Question Id : 301698410 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the proper sequence of *oil processing*

- A. Refining
- B. Pressing
- C. Solvent Extraction
- D. Rendering

Choose the most appropriate answer from the options given below:

- 1. D, B, C, A
- 2. A, C, B, D
- 3. D, C, B, A
- 4. C, B, D, A

Options :

- 3016981637. 1
- 3016981638. 2
- 3016981639. 3
- 3016981640. 4

Question Number : 36 Question Id : 301698411 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect is known as

- 1. Food-borne illness
- 2. Suitability
- 3. Contaminant
- 4. Hazard

Options :

- 3016981641. 1
- 3016981642. 2
- 3016981643. 3
- 3016981644. 4

Question Number : 37 Question Id : 301698412 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the sequence of *Jam preparation*

- A. Heating
- B. Chopping
- C. Addition of acid and pectin
- D. Washing

Choose the most appropriate answer from the options given below:

- 1. D, B, A, C
- 2. D, C, B, A
- 3. D, B, C, A
- 4. C, B, D, A

Options :

- 3016981645. 1
- 3016981646. 2
- 3016981647. 3
- 3016981648. 4

Question Number : 38 Question Id : 301698413 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The energy required for size reduction is proportional to the change in surface area of the pieces of food and is determined by _____

- 1. Ideal law
- 2. Kick's law
- 3. Rittinger's law
- 4. Bond's law

Options :

- 3016981649. 1
- 3016981650. 2
- 3016981651. 3
- 3016981652. 4

Question Number : 39 Question Id : 301698414 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Factors that determine the effectiveness of size reduction and influence the selection of an equipment are

- A. Friability of the food
- B. Bulk density
- C. Moisture content
- D. Heat sensitivity of the food

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981653. 1
- 3016981654. 2
- 3016981655. 3
- 3016981656. 4

Question Number : 40 Question Id : 301698415 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The system that detects or senses changes within the package environment, followed by modification of package properties in response to the detected change is known as

- 1. Aseptic Packaging
- 2. Passive Packaging
- 3. Active Packaging
- 4. Intelligent Packaging

Options :

- 3016981657. 1
- 3016981658. 2
- 3016981659. 3
- 3016981660. 4

Question Number : 41 Question Id : 301698416 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Diffusion Coefficients of Gases in Water at 20 °C)		LIST-II D ($\times 10^{-9}$ m /s ²)	
A	Chlorine	I	2.1
B	Carbon dioxide	II	1.9
C	Nitrogen	III	1.6
D	Oxygen	IV	1.8

Choose the most appropriate answer from the options given below:

1. A - I, B - IV, C - III, D - II

2. A - III, B - II, C - IV, D - I

3. A - I, B - II, C - IV, D - III

4. A - III, B - IV, C - II, D - I

Options :

3016981661. 1

3016981662. 2

3016981663. 3

3016981664. 4

Question Number : 42 Question Id : 301698417 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The ratio of mole fraction of water vapor in a given moist air sample to the mole fraction in an air sample saturated at the same temperature and pressure is known as

1. Relative Humidity

2. Specific Volume

3. Wet Bulb Temperature

4. Dew-Point Temperature

Options :

3016981665. 1

3016981666. 2

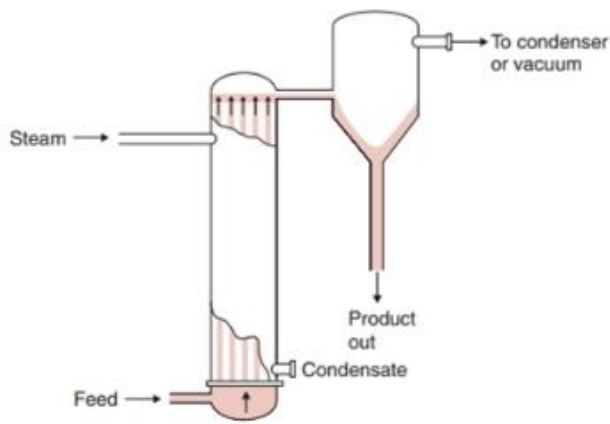
3016981667. 3

3016981668. 4

Question Number : 43 Question Id : 301698418 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Identify the evaporator



1. Batch-type pan evaporator
2. Falling-film evaporator
3. Natural-circulation evaporator
4. Rising-film evaporator

Options :

3016981669. 1
3016981670. 2
3016981671. 3
3016981672. 4

Question Number : 44 Question Id : 301698419 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The difference between the initial and the final temperature divided by the freezing time is known as

1. Freezing Time
2. Freezing Rate
3. Thawing Time
4. Thawing Rate

Options :

3016981673. 1
3016981674. 2
3016981675. 3
3016981676. 4

Question Number : 45 Question Id : 301698420 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

A typical microwave oven consists of the following major components

- A. Wave guide
- B. Magnetron
- C. Channel
- D. Stirrer

Choose the most appropriate answer from the options given below:

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

Options :

3016981677. 1
3016981678. 2
3016981679. 3
3016981680. 4

Question Number : 46 Question Id : 301698421 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the LIST-I with LIST-II

LIST-I (Type of Fouling)		LIST-II (Fouling Mechanism)	
A	Precipitation	I	Accumulation of fine particles suspended in the processed fluids on the heat transfer surface.
B	Freezing	II	Heat transfer surface reacts with ambient and corrodes.
C	Particulate	III	Solidification of liquid components on subcooled surfaces.
D	Corrosion	IV	Precipitation of dissolved substances. Salts such as CaSO_4 , CaCO_3 cause scaling.

Choose the most appropriate answer from the options given below:

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

Options :

3016981681. 1
 3016981682. 2
 3016981683. 3
 3016981684. 4

Question Number : 47 Question Id : 301698422 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the LIST-I with LIST-II

LIST-I (Fluid)		LIST-II (Typical example)	
A	Shear-thinning	I	Tomato ketchup
B	Newtonian	II	Milk
C	Shear-thickening	III	Whipped cream
D	Bingham plastic	IV	40% raw corn starch solution

Choose the most appropriate answer from the options given below:

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

Options :

3016981685. 1
 3016981686. 2
 3016981687. 3
 3016981688. 4

Question Number : 48 Question Id : 301698423 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Liquid)		LIST-II (Viscosity at room temperature, (Approximate) (Pa. s))	
A	Air	I	10^{-3}
B	Water	II	10^1
C	Olive Oil	III	10^{-5}
D	Liquid Honey	IV	10^{-1}

Choose the most appropriate answer from the options given below:

1. A - III, B - IV, C - I, D - II

2. A - III, B - I, C - IV, D - II

3. A - II, B - IV, C - I, D - III

4. A - II, B - I, C - IV, D - III

Options :

3016981689. 1

3016981690. 2

3016981691. 3

3016981692. 4

Question Number : 49 Question Id : 301698424 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arachidonic acid is composed of how many carbon atoms in its chain?

1. 20

2. 18

3. 16

4. 12

Options :

3016981693. 1

3016981694. 2

3016981695. 3

3016981696. 4

Question Number : 50 Question Id : 301698425 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Instrument used for measuring the humidity is _____

1. Thermometer
2. Hygrometer
3. Pyrometer
4. Penetrometer

Options :

3016981697. 1
3016981698. 2
3016981699. 3
3016981700. 4

Question Number : 51 Question Id : 301698426 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Saturated air has a relative humidity (RH) of

1. 0%
2. 75%
3. 50%
4. 100%

Options :

3016981701. 1
3016981702. 2
3016981703. 3
3016981704. 4

Question Number : 52 Question Id : 301698427 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The topmost curve in the psychrometric chart represents the saturation line with _____
% relative humidity.

1. 100
2. 75
3. 50
4. 0

Options :

3016981705. 1
3016981706. 2
3016981707. 3
3016981708. 4

Question Number : 53 Question Id : 301698428 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Potatoes with 85% moisture content on a wet basis are dried to a final moisture content of 10%. If we dry 100 kg of potatoes, what is the final weight of the product?

1. 15.66 kg
2. 16.66 kg
3. 17.66 kg
4. 18.66 kg

Options :

3016981709. 1
3016981710. 2
3016981711. 3
3016981712. 4

Question Number : 54 Question Id : 301698429 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Freeze drying is also known as

1. Crystallization
2. Gelatinization
3. Homogenization
4. Lyophilization

Options :

3016981713. 1
3016981714. 2
3016981715. 3
3016981716. 4

Question Number : 55 Question Id : 301698430 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The appearance, size, shape, density, and solubility of the final spray dried particle can be affected by

- A. Nozzle pressure
- B. Liquid viscosity
- C. Surface tension
- D. Nature of the solids

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981717. 1
- 3016981718. 2
- 3016981719. 3
- 3016981720. 4

Question Number : 56 Question Id : 301698431 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The energy required for size reduction is proportional to the logarithm of size reduction ratio, is given by _____ law.

- 1. Kicks' Law
- 2. Bonds' Law
- 3. Ficks' Law
- 4. Rittingers' Law

Options :

- 3016981721. 1
- 3016981722. 2
- 3016981723. 3
- 3016981724. 4

Question Number : 57 Question Id : 301698432 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In hammer mill operations, the dominant force is

1. Compressive force
2. Shear force
3. Impact force
4. Centrifugal force

Options :

- 3016981725. 1
- 3016981726. 2
- 3016981727. 3
- 3016981728. 4

Question Number : 58 Question Id : 301698433 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Find the "**Centrifuge effect**" of the centrifuge, which spins at the angular velocity ($\omega=523.6$ /sec) at a maximum radius of 10 cm.

1. 2794.6
2. 2694.6
3. 2594.6
4. 2494.6

Options :

- 3016981729. 1
- 3016981730. 2
- 3016981731. 3
- 3016981732. 4

Question Number : 59 Question Id : 301698434 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

In the sedimentation process, the rate of settling (moving) particles is affected by

- A. Gravitational pull
- B. Density of the particle
- C. Buoyancy force
- D. Size of the particle

Choose the most appropriate answer from the options given below:

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

Options :

- 3016981733. 1
- 3016981734. 2
- 3016981735. 3
- 3016981736. 4

Question Number : 60 Question Id : 301698435 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the steps involved in the gas transfer from gas bubble into bulk liquid

- A. The gaseous component diffused through the quiescent liquid film into the bulk liquid.
- B. The gaseous component enters into the liquid film.
- C. Transportation of the gaseous component into the well mixed bulk liquid
- D. The gaseous component transported from the bulk gas to gas-liquid interphase.

Choose the most appropriate answer from the options given below:

- 1. D, B, A, C
- 2. D, C, B, A
- 3. C, D, B, A
- 4. C, B, D, A

Options :

- 3016981737. 1
- 3016981738. 2
- 3016981739. 3
- 3016981740. 4

Question Number : 61 Question Id : 301698436 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Ficks' law of diffusion states that mass flux per unit area of a component is directly proportional to its _____

1. Velocity gradient
2. Temperature gradient
3. Concentration gradient
4. pH gradient

Options :

- 3016981741. 1
- 3016981742. 2
- 3016981743. 3
- 3016981744. 4

Question Number : 62 Question Id : 301698437 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Sherwood number is a function of

1. Reynolds' number and Rayleigh number
2. Rayleigh number and Grashof number
3. Reynolds' number and Grashof number
4. Reynolds' number and Schmidt number

Options :

- 3016981745. 1
- 3016981746. 2
- 3016981747. 3
- 3016981748. 4

Question Number : 63 Question Id : 301698438 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Sequentially arrange the processing steps of *coffee*

- A. Brewing
- B. Roasting
- C. Grinding
- D. Blending

Choose the most appropriate answer from the options given below:

- 1. D, B, C, A
- 2. D, C, B, A
- 3. B, A, D, C
- 4. B, D, A, C

Options :

- 3016981749. 1
- 3016981750. 2
- 3016981751. 3
- 3016981752. 4

Question Number : 64 Question Id : 301698439 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Lecithin is structurally like fat but contain

- 1. Amino acid
- 2. Hydrochloric acid
- 3. Phosphoric acid
- 4. Sugar

Options :

- 3016981753. 1
- 3016981754. 2
- 3016981755. 3
- 3016981756. 4

Question Number : 65 Question Id : 301698440 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The process which permits the formation of the polymorphic form in fats is known as

1. Conditioning
2. Hydrogenation
3. Tempering
4. Shortening

Options :

3016981757. 1
3016981758. 2
3016981759. 3
3016981760. 4

Question Number : 66 Question Id : 301698441 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

On treatment with alkali, chlorophyll changes to

1. Pheophytin
2. Chlorophyllin
3. Xanthophyll
4. Vitamin A

Options :

3016981761. 1
3016981762. 2
3016981763. 3
3016981764. 4

Question Number : 67 Question Id : 301698442 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Enzyme)		LIST-II (Catabolic Products)	
A	β -galactosidase	I	Choline + H_3PO_4 + fat
B	Lecithinase	II	Glycerol + fatty acids
C	Urease	III	Galactose + glucose
D	Lipase	IV	CO_2 + NH_3

Choose the most appropriate answer from the options given below:

1. A - III, B - IV, C - I, D - II

2. A - III, B - I, C - IV, D - II

3. A - III, B - II, C - IV, D - I

4. A - II, B - IV, C - I, D - III

Options :

3016981765. 1

3016981766. 2

3016981767. 3

3016981768. 4

Question Number : 68 Question Id : 301698443 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Bitterness is exhibited by alkaloids such as _____

1. Quinine

2. Beryllium salts

3. Lead acetate

4. Cyclamate

Options :

3016981769. 1

3016981770. 2

3016981771. 3

3016981772. 4

Question Number : 69 Question Id : 301698444 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Stage of Egg White foam)		LIST-II (Uses)	
A	Slightly beaten	I	Shirred egg
B	Stiff foam	II	Ice cream
C	Stiff	III	Thickening
D	Dry	IV	Meringues

Choose the most appropriate answer from the options given below:

1. A - I, B - II, C - III, D - IV

2. A - IV, B - III, C - I, D - II

3. A - III, B - II, C - IV, D - I

4. A - III, B - IV, C - II, D - I

Options :

3016981773. 1

3016981774. 2

3016981775. 3

3016981776. 4

Question Number : 70 Question Id : 301698445 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1

Match the **LIST-I** with **LIST-II**

LIST-I (Class of Meat)		LIST-II (Description)	
A	Veal	I	Flesh of a young ovine animal whose age is 12 months or under
B	Beef	II	Carcasses of young sheep usually from 12 to 20 months old
C	Mutton	III	Meat from cattle slaughtered 3 to 4 weeks after birth
D	Yearling mutton	IV	Meat of cattle over 1 year old

Choose the most appropriate answer from the options given below:

1. A - III, B - IV, C - I, D - II

2. A - IV, B - III, C - II, D - I

3. A - I, B - II, C - IV, D - III

4. A - III, B - IV, C - II, D - I

Options :

3016981777. 1

3016981778. 2

3016981779. 3

3016981780. 4

Question Number : 71 Question Id : 301698446 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the steps involved in *alkali processing of maize*

A. Washing with fresh water

B. Steeping in water for 14 hours

C. Milling to obtain “masa”

D. Mixing with water and lime at 90 °C for 50 minutes

Choose the most appropriate answer from the options given below:

1. D, B, C, A

2. D, B, A, C

3. B, A, D, C

4. C, B, D, A

Options :

3016981781. 1
3016981782. 2
3016981783. 3
3016981784. 4

Question Number : 72 Question Id : 301698447 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the sequence of steps involved in the reaction of enzymatic browning

- A. Formation of DOPA
- B. Action of PPO enzyme on cut fruits
- C. Polymerization of ortho-quinones to form melanins
- D. Formation of ortho-quinones

Choose the most appropriate answer from the options given below:

- 1. C, B, A, D
- 2. B, D, C, A
- 3. B, A, D, C
- 4. B, C, D, A

Options :

3016981785. 1
3016981786. 2
3016981787. 3
3016981788. 4

Question Number : 73 Question Id : 301698448 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the sequence of steps involved in the production of *sauerkraut*

- A. Pasteurization
- B. Salting
- C. Fermentation
- D. Shredding

Choose the most appropriate answer from the options given below:

- 1. D, B, C, A
- 2. D, B, A, C
- 3. C, A, B, D
- 4. C, B, D, A

Options :

3016981789. 1
3016981790. 2

3016981791. 3

3016981792. 4

Question Number : 74 Question Id : 301698449 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Arrange the steps involved in the production of *soy sauce*

- A. Roasting of wheat
- B. Moromi stage
- C. Lactic/ethanolic fermentation
- D. Fermentation at 25-30 °C for 2-3 days

Choose the most appropriate answer from the options given below:

- 1. A, D, B, C
- 2. A, C, B, D
- 3. A, D, C, B
- 4. C, B, D, A

Options :

3016981793. 1

3016981794. 2

3016981795. 3

3016981796. 4

Question Number : 75 Question Id : 301698450 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

The bacteria most commonly associated with the soft rotting of carrots is

- 1. *Corynebacterium spp.*
- 2. *Lactobacillus spp.*
- 3. *Pectobacterium spp.*
- 4. *Xanthomonas spp.*

Options :

3016981797. 1

3016981798. 2

3016981799. 3

3016981800. 4