National Testing Agency

Question Paper Name :	Food Engineering and Technology 17th March 2024 Shift 3
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Food Engineering and Technology

Group Number :	1
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Break time :	0
Group Marks :	300
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Food Engineering and Technology

Section Id :	680191118

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Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	680191155
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 1 Question Id : 6801916527 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the antinutritional toxic constituent responsible for infestation of groundnut with *Aspergillus flavus*.

1. Saponins
2. Gossypol
3. Aflatoxins
4. Haemagglutinins

Options :

68019125601. 1

68019125602. 2

68019125603. 3

68019125604. 4

Question Number : 2 Question Id : 6801916528 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 4 Wrong Marks : 1

Which type of protein structure involves the non-covalent association of protein chains, like in case of actomyosin system of muscles and the casein micelles of milk?

1. Primary structure
2. Secondary structure
3. Tertiary structure
4. Quaternary structure

Options :

68019125605. 1

68019125606. 2

68019125607. 3

68019125608. 4

Question Number : 3 Question Id : 6801916529 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the context of dextrinisation, which of the following statements are correct?
(A). If a starch product is subjected to dry heat, carbohydrate compounds called dextrins are formed
(B). When dextrins are dissolved in water, they impart a bitter taste
(C). Non-enzymatic browning occurs and a burnt toasted flavour develops
(D). Dry dextrins known as pyrodextrins are formed in the crust of baked flour mixtures

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

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

Options :

68019125609. 1

68019125610. 2

68019125611. 3

68019125612. 4

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Question Number : 4 Question Id : 6801916530 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I (Enzyme for tenderising meat)		LIST II (Source of enzyme)	
A.	Bromelain	I.	Pineapple
B.	Papain	II.	Papaya leaves
C.	Ficin	III.	Pancreas and fungal enzymes
D.	Trypsin	IV.	Figs

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

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

Options :

68019125613. 1

68019125614. 2

68019125615. 3

68019125616. 4

Question Number : 5 Question Id : 6801916531 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Which of the following statements are correct in context of polymerization reaction of lipids?

(A). Unsaturated fatty acids in lipids undergo polymerization owing to heat, oxidation, and the presence of free radicals or polar catalysts
(B). Heating of fats and oils, as in frying operations, can produce changes in molecular weight, colour, viscosity or refractive index due to polymerization
(C). Polymers increase the heat transfer efficiency of an oil and also improve the quality of products fried in oil.
(D). Under extreme conditions, polymerization can also enhance the nutritional quality of oils and their wholesomeness

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

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

Options :

68019125617. 1

68019125618. 2

68019125619. 3

68019125620. 4

Question Number : 6 Question Id : 6801916532 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the polar amino acid among the following options.

1. Isoleucine
2. Asparagine
3. Methionine
4. Tryptophan

Options :

68019125621. 1

68019125622. 2

68019125623. 3

68019125624. 4

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Question Number : 7 Question Id : 6801916533 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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

	LIST I (Food)		**LIST II (Pigment)**
A.	Tomatoes	I.	Chlorophyll
B.	Cherries, blueberries, red grapes	II.	Myoglobin
C.	Green leafy vegetables, capsicum, beans	III.	Lycopene
D.	Meat	IV.	Anthocyanins

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

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

Options :

68019125625. 1

68019125626. 2

68019125627. 3

68019125628. 4

Question Number : 8 Question Id : 6801916534 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Identify the aldehydic compound which is a major contributor to the flavour of chocolate.

1. Geranial
2. Benzaldehyde
3. 5-methyl-2-phenyl-2-hexenal
4. Acetaldehyde

Options :

68019125629. 1

68019125630. 2

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68019125631. 3

68019125632. 4

Question Number : 9 Question Id : 6801916535 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

If xerosis of conjunctiva is left untreated, it can lead to _____, which is characterized by ulceration, cloudiness and bacterial infection.

1. Bitot spot
2. Keratomalacia
3. Tetany
4. Cretinism

Options :

68019125633. 1

68019125634. 2

68019125635. 3

68019125636. 4

Question Number : 10 Question Id : 6801916536 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Heat penetration in processing can be hastened by which of the following option?

1. Using glass containers
2. Rotation and agitation
3. Layering of foods
4. Using larger cans

Options :

68019125637. 1

68019125638. 2

68019125639. 3

68019125640. 4

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Question Number : 11 Question Id : 6801916537 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Pseudomonas grows well in food containing

1. Nitrates
2. Vitamins
3. Antibiotics
4. Organic acid

Options :

68019125641. 1

68019125642. 2

68019125643. 3

68019125644. 4

Question Number : 12 Question Id : 6801916538 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

These soil molds are similar to Mucor except that the zygospore suspensors are markedly unequal in size

1. Rhizopus
2. Thamnidium
3. Absidia
4. Zygorrhynchus

Options :

68019125645. 1

68019125646. 2

68019125647. 3

68019125648. 4

Question Number : 13 Question Id : 6801916539 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 4 Wrong Marks : 1

A predominant soil organism, it is inert in most foods. Some species can grow at 5°C and would be considered psychrotrophs

1. Genus *Bacillus*
2. Genus *Acetobacter*
3. Genus *Arthrobacter*
4. Genus *Clostridium*

Options :

68019125649. 1

68019125650. 2

68019125651. 3

68019125652. 4

Question Number : 14 Question Id : 6801916540 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Cole crops include which of the following vegetable?

1. Kale
2. Eggplant
3. Radish
4. Tomato

Options :

68019125653. 1

68019125654. 2

68019125655. 3

68019125656. 4

Question Number : 15 Question Id : 6801916541 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Anti-carcinogenic effect of cauliflower is due to the high content of which substance

1. Phosphates
2. Glucosilonates
3. Inosine
4. Fibrin

Options :

68019125657. 1

68019125658. 2

68019125659. 3

68019125660. 4

Question Number : 16 Question Id : 6801916542 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Grains of some cereals are covered in caryopsis and in addition have fused palea and lemma which constitute the husk outside the fruit coat. The example of such cereal is

1. Wheat
2. Rye
3. Maize
4. Barley

Options :

68019125661. 1

68019125662. 2

68019125663. 3

68019125664. 4

Question Number : 17 Question Id : 6801916543 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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The preparation of ice cream is done in following order

(A). The mix are passed through freezer and temperature of the mix comes down to -5.5°C
(B). Mix is pasteurized at 71°C for 30 min. or HTST pasteurized at 82°C for 25 sec
(C). Liquid constituents are heated to 43°C, sugar and dry ingredients are added to the warm liquid
(D). The mix is homogenized and aged for 4 to 24 hours

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

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

Options :

68019125665. 1

68019125666. 2

68019125667. 3

68019125668. 4

Question Number : 18 Question Id : 6801916544 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).
Assertion (A) : Stabilizers are used to prevent the formation of ice crystals during freezing.
Reason (R) : Stabilizers form gels with the water in the formula and thereby improve the body and texture of the ice cream.
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.

Options :

68019125669. 1

68019125670. 2

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68019125671. 3

68019125672. 4

Question Number : 19 Question Id : 6801916545 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Ghee is the clarified butter fat obtained from cow or buffalo milk, produced by heat
desiccation of makkhan (butter) at temperature of

1. 90-95°C
2. 105-110°C
3. 120-125°C
4. 130-135°C

Options :

68019125673. 1

68019125674. 2

68019125675. 3

68019125676. 4

Question Number : 20 Question Id : 6801916546 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The starter composition for Blue-vein cheese is

1. *Lactococcus lactis, S.cremoris*
2. *Pencillium roqueforti and P.glaucum*
3. *S.lactis, Pencillium camemberti*
4. *Geotrichum candidum*

Options :

68019125677. 1

68019125678. 2

68019125679. 3

68019125680. 4

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Question Number : 21 Question Id : 6801916547 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Select the sequence for butter preparation

(A). Cream is pasteurized at 62.8°C for 30 min.
(B). Churning
(C). Ripening of cream at 21.1°C for several hours
(D). Draining off buttermilk

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

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

Options :

68019125681. 1

68019125682. 2

68019125683. 3

68019125684. 4

Question Number : 22 Question Id : 6801916548 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Completion of pasteurization of milk is ascertained by testing for the alkaline phosphatase activity in milk. The enzyme liberates phenol from phenyl phosphate. The liberated phenol gives what colour in milk

1. Yellow
2. Green
3. Red
4. Blue

Options :

68019125685. 1

68019125686. 2

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68019125687. 3

68019125688. 4

Question Number : 23 Question Id : 6801916549 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Sandiness in ice-cream is due to

1. Whey
2. Casein
3. Lactose
4. Lipids

Options :

68019125689. 1

68019125690. 2

68019125691. 3

68019125692. 4

Question Number : 24 Question Id : 6801916550 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Cans can also be made from TFS, also known as

1. Electrolytically chlorine-lead coated steel
2. Electrolytically chromium-coated steel
3. Electrolytically chlorine-coated steel
4. Electrolytically chlorine-zinc coated steel

Options :

68019125693. 1

68019125694. 2

68019125695. 3

68019125696. 4

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Question Number : 25 Question Id : 6801916551 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Paper is generally termed board when its gram-mage exceeds

1. 154 gsm
2. 184 gsm
3. 204 gsm
4. 224 gsm

Options :

68019125697. 1

68019125698. 2

68019125699. 3

68019125700. 4

Question Number : 26 Question Id : 6801916552 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

During MAP of fatty fish, gas composition should be

1. 40% N_2, 60% CO_2
2. 60% N_2, 40% CO_2
3. 30% N_2, 40% CO_2, 30% O_2
4. 40% CO_2, 60% O_2

Options :

68019125701. 1

68019125702. 2

68019125703. 3

68019125704. 4

Question Number : 27 Question Id : 6801916553 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 4 Wrong Marks : 1

Among the following which is NOT an inhibitor of polyphenol oxidase

1. Pineapple juice
2. Sulphites
3. Ascorbic acid
4. Pectinic acid

Options :

68019125705. 1

68019125706. 2

68019125707. 3

68019125708. 4

Question Number : 28 Question Id : 6801916554 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I Radiant Energy		**LIST II Wavelength (nm)**	
A.	Infrared	I.	less than 100
B.	UV	II.	13.6-400
C.	X-rays	III.	800
D.	Gamma rays	IV.	100-150

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

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

68019125709. 1

68019125710. 2

68019125711. 3

68019125712. 4

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Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Which of the following is **NOT** a unit of radiation

1. Gray
2. Roentgen
3. Electron volt
4. Electron amstrong

Options :

68019125713. 1

68019125714. 2

68019125715. 3

68019125716. 4

Question Number : 30 Question Id : 6801916556 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The choice of irradiation dosage of food is determined by taking into account various factors. The factors are

(A). Resistance of food enzymes
(B). Resistance of microorganisms
(C). Resistance of food to deterioration of organoleptic quality
(D). Resistance of food to moisture absorption

Choose the ***correct*** 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 :

68019125717. 1

68019125718. 2

68019125719. 3

68019125720. 4

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Question Number : 31 Question Id : 6801916557 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).
Assertion (A) : Steak can be crusted on outside but still be rare on inside.
Reason (R) : In conventional heating, direct contact with hot plate produces temperature gradient which can burn outside of food piece.
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.

Options :

68019125721. 1

68019125722. 2

68019125723. 3

68019125724. 4

Question Number : 32 Question Id : 6801916558 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I Composition of Cereal Grain		**LIST II %**	
A.	Moisture	I.	8-13
B.	Carbohydrate	II.	2-5
C.	Protein	III.	58-72
D.	Fat	IV.	10-14

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

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

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Options :

68019125725. 1

68019125726. 2

68019125727. 3

68019125728. 4

Question Number : 33 Question Id : 6801916559 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The structural feature of cereal rich in oil are

(A). Hull
(B). Bran
(C). Endosperm
(D). Hairs of brush

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

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

Options :

68019125729. 1

68019125730. 2

68019125731. 3

68019125732. 4

Question Number : 34 Question Id : 6801916560 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).
Assertion (A) : Hard wheat yields softer flour.
Reason (R) : Soft wheat is used for cake making.
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.

Options :

68019125733. 1

68019125734. 2

68019125735. 3

68019125736. 4

Question Number : 35 Question Id : 6801916561 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The process of grinding flour from conventional milling in high speed turbo grinders is

1. Grinding
2. Turbomilling
3. Shelling
4. Dehusking

Options :

68019125737. 1

68019125738. 2

68019125739. 3

68019125740. 4

Question Number : 36 Question Id : 6801916562 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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The process of paste formation when moistened starch is heated is called

1. Dextrinization
2. Retrogradation
3. Gelatinisation
4. Caramelisation

Options :

68019125741. 1

68019125742. 2

68019125743. 3

68019125744. 4

Question Number : 37 Question Id : 6801916563 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The following is a type of Contact heat exchanger

1. Scraped surface
2. Tubular
3. Plate
4. Steam infusion

Options :

68019125745. 1

68019125746. 2

68019125747. 3

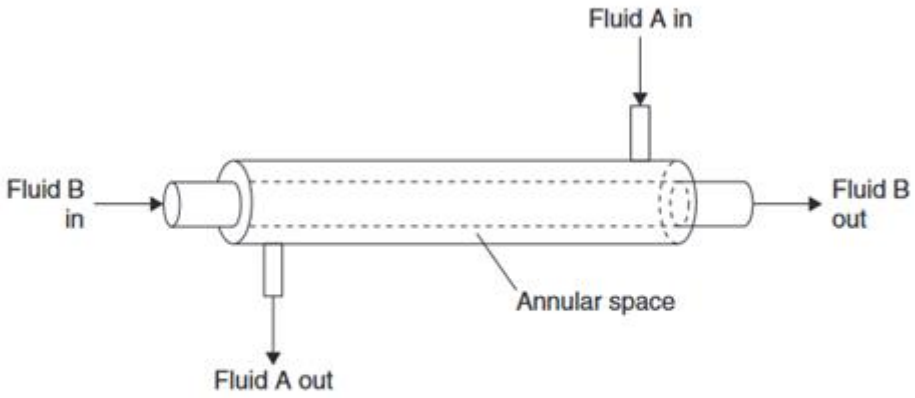
68019125748. 4

Question Number : 38 Question Id : 6801916564 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Identify the equipment shown in figure



1. Shell and tube heat exhanger
2. Steam infusion heat exhanger
3. Tubular heat exhanger
4. Plate heat exhanger

Options :

68019125749. 1

68019125750. 2

68019125751. 3

68019125752. 4

Question Number : 39 Question Id : 6801916565 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The law governing heat transfer by conduction is

1. Newton's law
2. Fourier's law
3. Fick's law
4. Stefan Boltzmann law

Options :

68019125753. 1

68019125754. 2

68019125755. 3

68019125756. 4

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Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Enthalapy of dry air is given by the expression

1. $Ha=1.005(Ta-T_0)$
2. $Ha=0.005(Ta-T_0)$
3. $Ha=1.88(Ta-T_0)$
4. $Ha=2501.4+1.88(Ta-T_0)$

Options :

68019125757. 1

68019125758. 2

68019125759. 3

68019125760. 4

Question Number : 41 Question Id : 6801916567 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The water vapor in the air will be saturated when air is at a temperature equal to

1. Saturation pressure corresponding to the partial pressure exerted by the water vapor
2. Saturation temperature corresponding to the partial pressure exerted by the dry air
3. Saturation temperature corresponding to the partial pressure exerted by the water vapor
4. Saturation pressure corresponding to the partial pressure exerted by the dry air

Options :

68019125761. 1

68019125762. 2

68019125763. 3

68019125764. 4

Question Number : 42 Question Id : 6801916568 Question Type : MCQ Option Shuffling : No Is

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Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The psychrometric wet bulb temperature is obtained

1. When the bulb of a mercury thermometer is unmodified
2. When the bulb of a mercury thermometer is dipped in 0.1N NaCl
3. When the bulb of a mercury thermometer is dipped in 0.01 N NaCl
4. When the bulb of a mercury thermometer is covered with a wet wick

Options :

68019125765. 1

68019125766. 2

68019125767. 3

68019125768. 4

Question Number : 43 Question Id : 6801916569 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The chart that is used to determine the boiling point of the solutions of given concentrations is known as:

1. Duhring chart
2. Psychometric chart
3. Refrigerant 12 chart
4. Steam chart

Options :

68019125769. 1

68019125770. 2

68019125771. 3

68019125772. 4

Question Number : 44 Question Id : 6801916570 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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The removal of moisture from a typical food product will follow a series of drying rates. Identify the various stages
(A). Initial Adjustment
(B).Constant Rate
(C). Falling rate
(D). Logarithmic Rate
Choose the ***correct*** 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 :

68019125773. 1

68019125774. 2

68019125775. 3

68019125776. 4

Question Number : 45 Question Id : 6801916571 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The Drying process that results in moisture removal by Sublimation is

1. Vacuum Drying
2. Freeze Drying
3. Foam mat drying
4. Spray Drying

Options :

68019125777. 1

68019125778. 2

68019125779. 3

68019125780. 4

Question Number : 46 Question Id : 6801916572 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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The constant-rate drying period occurs with the product at the

1. Equilibrium Relative Humidity
2. Dry bulb temperature of the air
3. wet bulb temperature of the air
4. Dew point temperature

Options :

68019125781. 1

68019125782. 2

68019125783. 3

68019125784. 4

Question Number : 47 Question Id : 6801916573 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Concentration Gradient is the key driving force in which of the following Membrane processes

1. Reverse Osmosis
2. Ultrafiltration
3. Dialysis
4. Nanofiltration

Options :

68019125785. 1

68019125786. 2

68019125787. 3

68019125788. 4

Question Number : 48 Question Id : 6801916574 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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The major types of membrane devices used for reverse-osmosis and ultrafiltration systems are:

(A) Plate-and-frame
(B). Tubular,
(C).Spiral-wound
(D).Hollow-fiber.
Choose the ***correct*** 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 :

68019125789. 1

68019125790. 2

68019125791. 3

68019125792. 4

Question Number : 49 Question Id : 6801916575 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In a multi-effect evaporator, steam is supplied externally as a source of heat

1. Only in the first effect.
2. Only in the first and last effect.
3. In all the effects
4. In No effect

Options :

68019125793. 1

68019125794. 2

68019125795. 3

68019125796. 4

Question Number : 50 Question Id : 6801916576 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

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Correct Marks : 4 Wrong Marks : 1

One of the simplest and perhaps oldest types of evaporators used in the food industry is

1. Rising film evaporator
2. Falling film evaporator
3. Batch-type pan evaporator,
4. Rotary Vacuum evaporator

Options :

68019125797. 1

68019125798. 2

68019125799. 3

68019125800. 4

Question Number : 51 Question Id : 6801916577 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Streptococcus lactis causes

1. no spoilage of milk
2. production of antibiotics
3. color change in milk
4. no color change in milk

Options :

68019125801. 1

68019125802. 2

68019125803. 3

68019125804. 4

Question Number : 52 Question Id : 6801916578 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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A dry food like bread is most likely to be spoilt by

1. Molds
2. Yeasts
3. Thermophilic bacteria
4. Mesophilic bacteria

Options :

68019125805. 1

68019125806. 2

68019125807. 3

68019125808. 4

Question Number : 53 Question Id : 6801916579 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The rapid and constant rate of multiplication of an organism occurs during the

1. Lag Phase
2. Exponential Phase
3. Stationary Phase
4. Decline Phase

Options :

68019125809. 1

68019125810. 2

68019125811. 3

68019125812. 4

Question Number : 54 Question Id : 6801916580 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Match List I with List II

LIST I (Initial concentration of spores, number/ml)		LIST II (Thermal death time, or time required to kill all spores, min at 120 °C)	
A.	50,000	I.	9
B.	5,000	II.	14
C.	500	III.	8
D.	50	IV.	10

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

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

Options :

68019125813. 1

68019125814. 2

68019125815. 3

68019125816. 4

Question Number : 55 Question Id : 6801916581 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Berries and Sauerkraut are classified as

1. Low-acid foods
2. Medium-acid foods
3. High-Acid foods
4. Acid foods

Options :

68019125817. 1

68019125818. 2

68019125819. 3

68019125820. 4

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Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Malt foods are prepared by blending
(A). 40 per cent cereal malt
(B). 40 per cent groundnut flour
(C).10 per cent Bengal gram flour
(D).10 per cent skim milk powder
Choose the correct 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 :

68019125821. 1

68019125822. 2

68019125823. 3

68019125824. 4

Question Number : 57 Question Id : 6801916583 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

	LIST I (Nutrient)		**LIST II % (Daily value)**
A.	Omega-3 fatty acids	I.	21.6
B.	Dietary Fibre	II.	17.5
C.	Vitamin B-6	III.	140.4
D.	Magnesium	IV.	9.0

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

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

Options :

68019125825. 1

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68019125826. 2

68019125827. 3

68019125828. 4

Question Number : 58 Question Id : 6801916584 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The steps involved in the processing of oil and fats from animal tissues are given below
(A). Solvent Extraction
(B). Refining
(C). Rendering
(D). Pressing
Choose the ***correct*** sequence of steps from the options given below:

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

Options :

68019125829. 1

68019125830. 2

68019125831. 3

68019125832. 4

Question Number : 59 Question Id : 6801916585 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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The various processing steps in the manufacture of black tea are
(A).Fermentation
(B).Drying
(C).Rolling
(D).Withering
Arrange the steps in the ***correct*** sequence from the options given below:

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

Options :

68019125833. 1

68019125834. 2

68019125835. 3

68019125836. 4

Question Number : 60 Question Id : 6801916586 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Steps in processing of cocoa are:
(A). Drying of beans
(B). Fermentation
(C). Roasting of beans
(D). Scooping out of beans and mucilage
Select the ***correct*** sequence

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

Options :

68019125837. 1

68019125838. 2

68019125839. 3

68019125840. 4

Question Number : 61 Question Id : 6801916587 Question Type : MCQ Option Shuffling : No Is

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Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Arrange the sequence of pastry prepration
(A). Addition of water and working in the dough
(B). Flour and salt are mixed and the fat is cut into the flour
(C). Baking in oven
(D).Shaping of dough
Choose the ***correct*** answer from the options given below:

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

Options :

68019125841. 1

68019125842. 2

68019125843. 3

68019125844. 4

Question Number : 62 Question Id : 6801916588 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The type of cookies made from refrigerated stiff dough is

1. Drop cookies
2. Rolled cookies
3. Bar cookies
4. Sponge cookies

Options :

68019125845. 1

68019125846. 2

68019125847. 3

68019125848. 4

Question Number : 63 Question Id : 6801916589 Question Type : MCQ Option Shuffling : No Is

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Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

In the preparation of pastry, the proprtion of flour, fat and water is

1. 5:2:1
2. 5:4:1
3. 6:4:1
4. 6:2:1

Options :

68019125849. 1

68019125850. 2

68019125851. 3

68019125852. 4

Question Number : 64 Question Id : 6801916590 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

A good chapati is sweetish and palatable and it requires a minimum sugar percent to give the desired characteristic. The minimum sugar percent should be

1. 0.5 %
2. 1.0%
3. 1.5%
4. 2.5%

Options :

68019125853. 1

68019125854. 2

68019125855. 3

68019125856. 4

Question Number : 65 Question Id : 6801916591 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Match List I with List II

LIST I (Type of Fluid)		LIST II (Examples.)	
A.	Herschel–Bulkley	I.	Some types of honey, 40% raw corn starch solution
B.	Newtonian	II.	Minced fish paste, Raisin paste
C.	Shear-thinning (pseudoplastic)	III.	Honey, milk
D.	Shear-thickening	IV.	Banana purée, orange juice concentrate

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

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

Options :

68019125857. 1

68019125858. 2

68019125859. 3

68019125860. 4

Question Number : 66 Question Id : 6801916592 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Phenomenon in which a substance occurs in different crystalline forms ?

1. Rancidity
2. Polymorphism
3. Polymerization
4. Denaturation

Options :

68019125861. 1

68019125862. 2

68019125863. 3

68019125864. 4

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Question Number : 67 Question Id : 6801916593 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Processes that take place during caramelization reaction are
(A). Isomerization
(B). Inversion of sucrose
(C). Putrefaction
(D). Condensation reactions
Choose the ***correct*** 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 :

68019125865. 1

68019125866. 2

68019125867. 3

68019125868. 4

Question Number : 68 Question Id : 6801916594 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Heat is the most important physical agent. For every 10°C rise in temperature the increase in denaturation rate of protein is

1. 300 fold
2. 600 fold
3. 900 fold
4. 1200 fold

Options :

68019125869. 1

68019125870. 2

68019125871. 3

68019125872. 4

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Question Number : 69 Question Id : 6801916595 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I (Material)		LIST II (Thermal Conductivity W/m°C)	
A.	Air (at 20°C)	I.	0.597
B.	Water (at 20°C)	II.	10-120
C.	Alloys	III.	0.035-0.173
D.	Insulating Materials	IV.	0.0251

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

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

Options :

68019125873. 1

68019125874. 2

68019125875. 3

68019125876. 4

Question Number : 70 Question Id : 6801916596 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

For the best acceptability, texture and quality of idli, the proportion of rice to black-gram dhal is 2 : 1. This mucilaginous material is a complex carbohydrate containing

1. Amylose and Amylopectin
2. Galactose and Amylose
3. Galactose and Arabinose
4. Maltose and Galactose

Options :

68019125877. 1

68019125878. 2

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68019125879. 3

68019125880. 4

Question Number : 71 Question Id : 6801916597 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Percent of alcohol present in fortified wines is about

1. 5 percent
2. 10 percent
3. 15 percent
4. 20 percent

Options :

68019125881. 1

68019125882. 2

68019125883. 3

68019125884. 4

Question Number : 72 Question Id : 6801916598 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I (Process)		**LIST II (Product)**	
A.	Filtration	I.	Cream
B.	Centrifugation	II.	Foam
C.	Mixing	III.	Cordial
D.	Settling	IV.	Waste treatment

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

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

Options :

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68019125885. 1

68019125886. 2

68019125887. 3

68019125888. 4

Question Number : 73 Question Id : 6801916599 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

The sequence of steps during spray drying of liquid foods

(A). Cyclone separation
(B). Atomization
(C). Hot air drying
(D). Pumping of liquid

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

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

Options :

68019125889. 1

68019125890. 2

68019125891. 3

68019125892. 4

Question Number : 74 Question Id : 6801916600 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

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Which of the following are the correct steps of a HACCP plan
(A). Monitoring
(B). Identification
(C). Stimulation
(D). Documentation
Choose the correct answer from the options given below:

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

Options :

68019125893. 1

68019125894. 2

68019125895. 3

68019125896. 4

Question Number : 75 Question Id : 6801916601 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Wrong Marks : 1

Match List I with List II

LIST I (Process)		**LIST II (Particle Size in Micrometers)**	
A.	Nano Filtration	I.	0.1 -1.0
B.	Micro Filtration	II.	0.01 -1.0
C.	Ultrafiltration	III.	< 0.001
D.	Reverse Osmosis	IV.	0.001 - 0.01

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

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

Options :

68019125897. 1

68019125898. 2

68019125899. 3

68019125900. 4

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