

36 Dairy Microbiology ICAR SEPT 2022

Topic:- GEN KNOW COMMON PHD

1) Colour of the tag used on certified seed bags is[Question ID = 16958][Question Description = 101_221_GKD_SEP22_Q01]

1. Blue [Option ID = 37829]
2. Purple [Option ID = 37830]
3. White [Option ID = 37831]
4. Golden Yellow [Option ID = 37832]

2) Following are the statements regarding the Usar soil -

- A. It is reclaimed by adding lime.
- B. This soil has pH more than seven.
- C. Paddy crop can be grown in this soil.

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

[Question ID = 16959][Question Description = 102_221_GKD_SEP22_Q02]

1. A and B only [Option ID = 37833]
2. B and C only [Option ID = 37834]
3. C only [Option ID = 37835]
4. A only [Option ID = 37836]

3) When total utility of a commodity increases, marginal utility will be

[Question ID = 16960][Question Description = 103_221_GKD_SEP22_Q03]

1. Negative but increasing
[Option ID = 37837]
2. Positive but decreasing
[Option ID = 37838]
3. Constant
[Option ID = 37839]
4. Either positive or negative
[Option ID = 37840]

4) Where is the headquarter of International Fund for Agriculture Development located?

[Question ID = 16961][Question Description = 104_221_GKD_SEP22_Q04]

1. Vienna, Austria
[Option ID = 37841]
2. Rome, Italy
[Option ID = 37842]
3. New York, USA
[Option ID = 37843]
4. Berlin, Germany
[Option ID = 37844]

5) Mid-Oceanic Ridges are one of the important divisions of the ocean floor. In this respect, point out the incorrect statement regarding the 'Mid-Oceanic Ridges'. [Question ID = 16962][Question Description = 105_221_GKD_SEP22_Q05]

1. It is the largest mountain chain on the surface of the earth [Option ID = 37845]
2. It is a series of interconnected chain within the ocean. [Option ID = 37846]
3. It is characterised by a central rift system [Option ID = 37847]
4. The rift system at the crest is the zone of very low volcanic activity. [Option ID = 37848]

6) Consider the following facts about the union territory of India and point out the one which is incorrect in relation to union territory.[Question ID = 16963][Question Description = 106_221_GKD_SEP22_Q06]

1. These are the areas under the direct control of central government. [Option ID = 37849]
2. Also known as the 'centrally administered territories. [Option ID = 37850]

3. These territories constitute a conspicuous departure from the unitary feature of India. [Option ID = 37851]
4. There is no uniformity in their administrative systems. [Option ID = 37852]

7) Variety of flora and fauna are found in the different types of forest in India. In this regard, species of trees like teak, *sal shisham*, *sandalwood*, etc. are found in which of the following type of forests in India?[Question ID = 16964][Question Description = 107_221_GKD_SEP22_Q07]

1. Tropical evergreen forests [Option ID = 37853]
2. Tropical thorn forests [Option ID = 37854]
3. Tropical deciduous forests [Option ID = 37855]
4. Montane forests [Option ID = 37856]

8) The Marginal Preference Theory of consumption behaviour was proposed by

[Question ID = 16965][Question Description = 108_221_GKD_SEP22_Q08]

1. Armstrong
[Option ID = 37857]
2. J.K.Hicks
[Option ID = 37858]
3. Neumann
[Option ID = 37859]
4. Edmund Cannon
[Option ID = 37860]

9) Point out the incorrect statements regarding the service sector in India.[Question ID = 16966][Question Description = 109_221_GKD_SEP22_Q09]

1. It is the highest contributor to GDP [Option ID = 37861]
2. It requires skilled labour [Option ID = 37862]
3. It is the fastest growing sector [Option ID = 37863]
4. It is restricted to very few sectors. [Option ID = 37864]

10) Consider the statements regarding the agriculture sector in India and point out the incorrect statement.[Question ID = 16967][Question Description = 110_221_GKD_SEP22_Q10]

1. Agriculture sector is the largest employer of workforce [Option ID = 37865]
2. It has contributed to the Gross Value Added (GVA) [Option ID = 37866]
3. Growth in allied sectors is the major drivers of overall growth in the sector. [Option ID = 37867]
4. Minimum Support Price (MSP) policy is used as to promote crop uniformity. [Option ID = 37868]

11) In case of related goods, the cross elasticity of demand is[Question ID = 16968][Question Description = 111_221_GKD_SEP22_Q11]

1. Low [Option ID = 37869]
2. High [Option ID = 37870]
3. Zero [Option ID = 37871]
4. Unity [Option ID = 37872]

12) With reference to organic farming in India, consider the following statements :

- A. The National Programme for Organic Production' (NPOP) is operated under the guidelines and directions of the Union Ministry of Rural Development.
- B. The Agricultural and Processed Food Products Export Development Authority' (APEDA) functions as the Secretariat for the implementation of NPOP.
- C. Sikkim has become India's first fully organic state.

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

[Question ID = 16969][Question Description = 112_221_GKD_SEP22_Q12]

1. A and B only
[Option ID = 37873]
2. B and C only
[Option ID = 37874]
3. C only
[Option ID = 37875]
4. A, B and C

[Option ID = 37876]

13) With reference to the circumstances in Indian agriculture, the concept of "Conservation Agriculture" assumes significance. Which of the following falls under the Conservation Agriculture ?

- A. Avoiding the monoculture practices.
- B. Adopting minimum tillage.
- C. Avoiding the cultivation of plantation crops.
- D. Using crop residues to cover soil surface.
- E. Adopting spatial and temporal crop sequencing/ crop rotations.

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

[Question ID = 16970][Question Description = 113_221_GKD_SEP22_Q13]

- 1. A, C and D only [Option ID = 37877]
- 2. B, C, D and E only [Option ID = 37878]
- 3. B, D and E only [Option ID = 37879]
- 4. A, B, C and E only [Option ID = 37880]

14) Consumers are likely to get a variety of goods in which kind of market competition[Question ID = 16971][Question Description = 114_221_GKD_SEP22_Q14]

- 1. Monopoly [Option ID = 37881]
- 2. Duopoly [Option ID = 37882]
- 3. Oligopoly [Option ID = 37883]
- 4. Monopolistic [Option ID = 37884]

15) What is the correct chronological order of the following laws enacted for the conservation and protection of environment ?

- A. Environment (Protection) Act.
- B. Water (Prevention & Control of Pollution) Act.
- C. Air (Prevention & Control of pollution) Act.
- D. National Green Tribunal Act.

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

[Question ID = 16972][Question Description = 115_221_GKD_SEP22_Q15]

- 1. B, C, A, D [Option ID = 37885]
- 2. A, B, C, D [Option ID = 37886]
- 3. C, B, A, D [Option ID = 37887]
- 4. D, C, B, A [Option ID = 37888]

16) The scientific study of soil is[Question ID = 16973][Question Description = 116_221_GKD_SEP22_Q16]

- 1. Earth Study [Option ID = 37889]
- 2. Soil Science [Option ID = 37890]
- 3. Pedology [Option ID = 37891]
- 4. Soil Chemistry [Option ID = 37892]

17) *Triticum aestivum*, the common bread wheat is -

[Question ID = 16974][Question Description = 117_221_GKD_SEP22_Q17]

- 1. Tetraploid
[Option ID = 37893]
- 2. Hexaploid
[Option ID = 37894]
- 3. Haploid
[Option ID = 37895]
- 4. Diploid
[Option ID = 37896]

18) Sectoral inflation refers to[Question ID = 16975][Question Description = 118_221_GKD_SEP22_Q18]

- 1. Running inflation [Option ID = 37897]

2. Comprehensive inflation [Option ID = 37898]
3. Sporadic inflation [Option ID = 37899]
4. Creeping inflation [Option ID = 37900]

19) Keynes Liquidity trap refers to[Question ID = 16976][Question Description = 119_221_GKD_SEP22_Q19]

1. Speculative demand for money [Option ID = 37901]
2. Transactions motive of money is inelastic [Option ID = 37902]
3. Precautionary motive of money is inelastic [Option ID = 37903]
4. Transactions motive of money is constant [Option ID = 37904]

20) A business is solvent if[Question ID = 16977][Question Description = 120_221_GKD_SEP22_Q20]

1. Total receipts exceed total expenditures [Option ID = 37905]
2. Total debt exceeds total equity [Option ID = 37906]
3. Total sales exceed total cash expense [Option ID = 37907]
4. Total assets exceed total liabilities [Option ID = 37908]

Topic:- Dairy Sci n Dairy Tech Food Tech_PHD

1) Match List I with List II

List I	List II
(Name of the cheese)	(Category of the cheese)
A. Cheddar	I. Acid coagulated cheese
B. Mozzarella	II. Whey cheese
C. Quarg	III. Hard cheese
D. Ricotta	IV. Pasta filata

Choose the correct answer from the options given below:

[Question ID = 4451][Question Description = 101_50_DAI_SEP22_Q01]

1. A - III, B - IV, C - II, D - I [Option ID = 17801]
2. A - III, B - IV, C - I, D - II [Option ID = 17802]
3. A - II, B - III, C - I, D - IV [Option ID = 17803]
4. A - I, B - II, C - III, D - IV [Option ID = 17804]

2) Arrange the following membrane processes in the order of increasing pore size of the membranes used in these processes.

- A. MF
- B. NF
- C. RO
- D. UF

Choose the *correct* answer from the options given below

[Question ID = 4452][Question Description = 102_50_DAI_SEP22_Q02]

1. A, B, C, D [Option ID = 17805]
2. D, C, B, A [Option ID = 17806]
3. A, D, B, C [Option ID = 17807]
4. A, D, C, B [Option ID = 17808]

3) Human milk contains more _____ as compared to bovine milk.[Question ID = 4453][Question Description = 103_50_DAI_SEP22_Q03]

1. whey proteins [Option ID = 17809]
2. B-Casein [Option ID = 17810]
3. α_{s1} -Casein [Option ID = 17811]
4. κ -Casein [Option ID = 17812]

4) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Fat destabilization during ice cream freezing facilitates air cells stability

Reason R: Absorption of emulsifiers on the surface of fat globule membrane

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

[Question ID = 4454][Question Description = 104_50_DAI_SEP22_Q04]

1. Both A and R are correct and R is the correct explanation of A [Option ID = 17813]

2. Both A and R are correct but R is NOT the correct explanation of A [Option ID = 17814]
3. A is correct but R is not correct [Option ID = 17815]
4. A is not correct but R is correct [Option ID = 17816]

5) Maximum temperature to which milk particles are exposed during spray drying in the drying chamber is _____ degree celsius.

[Question ID = 4455][Question Description = 105_50_DAI_SEP22_Q05]

1. 40
[Option ID = 17817]
2. 50
[Option ID = 17818]
3. 60
[Option ID = 17819]
4. 70
[Option ID = 17820]

6) Use of fluidized bed drier for milk powders increases _____ [Question ID = 4456][Question Description = 106_50_DAI_SEP22_Q06]

1. Bulk density [Option ID = 17821]
2. Tapped density [Option ID = 17822]
3. Dispersibility [Option ID = 17823]
4. Scorched particle [Option ID = 17824]

7) _____ test is conducted to determine the Linear viscoelastic region of materials [Question ID = 4457]
[Question Description = 107_50_DAI_SEP22_Q07]

1. Amplitude sweep [Option ID = 17825]
2. Frequency sweep [Option ID = 17826]
3. Dynamic sweep [Option ID = 17827]
4. Static sweep [Option ID = 17828]

8) Which of the following drying aids acts as wetting agents to promote water removal from foods? [Question ID = 4458]
[Question Description = 108_50_DAI_SEP22_Q08]

1. Locust bean gum [Option ID = 17829]
2. Ethyl oleate [Option ID = 17830]
3. Xanthan gum [Option ID = 17831]
4. Methyl sulfonate [Option ID = 17832]

9) Which of the following tests is used to determine the mucosal adherence ability of probiotic organisms? [Question ID = 4459][Question Description = 109_50_DAI_SEP22_Q09]

1. Acid tolerance test [Option ID = 17833]
2. Bile tolerance test [Option ID = 17834]
3. Cell surface hydrophobicity [Option ID = 17835]
4. Bile salt hydrolase activity [Option ID = 17836]

10) Sorption isotherms of most food products are in _____ shape [Question ID = 4460][Question Description = 110_50_DAI_SEP22_Q10]

1. Sigmoid [Option ID = 17837]
2. Parabolic [Option ID = 17838]
3. Elliptical [Option ID = 17839]
4. Decagonal [Option ID = 17840]

11) Which of the following is correct with regard to cocoa flavor?

- A. Caffeine and theobromine impart bitterness.
- B. Polyphenolic compounds impart astringency.
- C. Cocoa flavor precursors are involved in Maillard's reaction during the roasting of the cocoa beans.
- D. Solid fat index of cocoa butter also contributes to cocoa flavor.

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

[Question ID = 4461][Question Description = 111_50_DAI_SEP22_Q11]

1. A, B and D only [Option ID = 17841]

2. B and C only [Option ID = 17842]
3. A and D only [Option ID = 17843]
4. A, B and C only [Option ID = 17844]

12) Which of the following is the bitter compound present in bitter oranges?

[Question ID = 4462][Question Description = 112_50_DAI_SEP22_Q12]

1. Hesperidin (Hesperitin-7-rutinoside) [Option ID = 17845]
2. Neohesperidin (Eriodictyol-7-O-neohesperidoside) [Option ID = 17846]
3. Naringin (Naringenin-7-neohesperidoside) [Option ID = 17847]
4. Neohesperidin (Hesperetin-7-neohesperidoside) [Option ID = 17848]

13) To prevent the oxidation of beer, bottled beer should not contain more than _____ mg of oxygen per liter.

[Question ID = 4463][Question Description = 113_50_DAI_SEP22_Q13]

1. 0.5 [Option ID = 17849]
2. 1.0 [Option ID = 17850]
3. 5.0 [Option ID = 17851]
4. 0.1 [Option ID = 17852]

14) Match List I with List II

List I	List II
Property	Plastic packaging material
A. Excellent shrink property	I. EVOH
B. Excellent stretch property	II. PS
C. Excellent blister property	III. LDPE
D. Excellent oxygen barrier property	IV. PVC
	V. OPP

Choose the correct answer from the options given below:

[Question ID = 4464][Question Description = 114_50_DAI_SEP22_Q14]

1. A -II , B -V , C -I , D -III [Option ID = 17853]
2. A -V , B -III , C -IV , D -I [Option ID = 17854]
3. A -IV , B -I , C -V , D -II [Option ID = 17855]
4. A -III , B -IV , C -II , D -V [Option ID = 17856]

15) Which of the following treatments effectively prevents the sprouting of onions during long-term storage?

[Question ID = 4465][Question Description = 115_50_DAI_SEP22_Q15]

1. Curing [Option ID = 17857]
2. Waxing [Option ID = 17858]
3. Spraying maleic hydrazide [Option ID = 17859]
4. Dipping in the water containing calcium carbide [Option ID = 17860]

16) Given below are two statements:

Statement I: For parboiling of the rice, mostly long-grain cultivars of intermediate and high amylose contents are used.

Statement II: During the bread manufacture, reducing agents such as L-cysteine, glutathione, and sodium metabisulfite is added to strengthen the dough structure.

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

[Question ID = 4466][Question Description = 116_50_DAI_SEP22_Q16]

1. Both Statement I and Statement II are true [Option ID = 17861]
2. Both Statement I and Statement II are false [Option ID = 17862]
3. Statement I is true but Statement II is false [Option ID = 17863]
4. Statement I is false but Statement II is true [Option ID = 17864]

17) Read the following options related to chemically leavened bakery products.

- A. The dough formula of wafer and ice cream cone contains high sugar, essentially no fat, and a small amount of water.
- B. Cracking pattern on the surface of cookies is due to the crystallization of sugar at the surface that no longer holds water to give a moist and moldable surface and expansion of cookies due to leavening.
- C. The setting of cakes in the oven is partially due to the starch gelatinization and egg protein coagulation.
- D. The egg white is an important component of the angel cake formula wherein the eggs and sugar are whipped to a protein

foam, and then the flour is folded in carefully so as not to disrupt the foam.

E. Bread formulas usually contain surfactants to increase the bread's softness and shelf life.

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

[Question ID = 4467][Question Description = 117_50_DAI_SEP22_Q17]

1. A, B and D only [Option ID = 17865]
2. D and E only [Option ID = 17866]
3. A, B and C only [Option ID = 17867]
4. B, C, D and E only [Option ID = 17868]

18) Which of the following egg proteins binds riboflavin?

[Question ID = 4468][Question Description = 118_50_DAI_SEP22_Q18]

1. Ovomucoid [Option ID = 17869]
2. Flavoprotein [Option ID = 17870]
3. Avidin [Option ID = 17871]
4. Conalbumin [Option ID = 17872]

19) According to the Food Safety and Standards (Fortification of Foods) Regulations (2016), the level of vitamin D fortificant in fortified edible oil is between _____ (retinol equivalent, RE) per gram of oil.

[Question ID = 4469][Question Description = 119_50_DAI_SEP22_Q19]

1. 6 µg RE and 9.9 µg RE [Option ID = 17873]
2. 270 µg RE and 450 µg RE [Option ID = 17874]
3. 0.11 µg RE and 0.16 µg RE [Option ID = 17875]
4. 75 µg RE and 125 µg RE [Option ID = 17876]

20) Given below are two statements

Statement I: The type of recrystallization of ice crystals in which there is a change in surface shape or internal structure, usually resulting in a lower surface-area-to-volume ratio is called "accretive recrystallization".

Statement II: The type of recrystallization of ice crystals in which there is an increase in the average size and a reduction in the average number of crystals, caused by the growth of larger crystals at the expense of smaller crystals is called "Isomass recrystallization"

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

[Question ID = 4470][Question Description = 120_50_DAI_SEP22_Q20]

1. Both Statement I and Statement II are correct [Option ID = 17877]
2. Both Statement I and Statement II are incorrect [Option ID = 17878]
3. Statement I is correct but Statement II is incorrect [Option ID = 17879]
4. Statement I is incorrect but Statement II is correct [Option ID = 17880]

21) Food Borne illness that can be caused by a food service worker coughing or sneezing on food is

[Question ID = 4471][Question Description = 121_50_DAI_SEP22_Q21]

1. *Clostridium botulinum*
[Option ID = 17881]
2. *S. aureus*
[Option ID = 17882]
3. *E. coli*
[Option ID = 17883]
4. *Salmonella typhimurium*
[Option ID = 17884]

22) Pick the incorrect statement regarding drum drying[Question ID = 4472][Question Description = 122_50_DAI_SEP22_Q22]

1. Contact time 3 sec or less [Option ID = 17885]
2. Removal after $\frac{3}{4}$ to $\frac{7}{8}$ revolution [Option ID = 17886]
3. Drum clearance 0.5 to 1.0 mm [Option ID = 17887]
4. Steam economy 1.6 to 2.5 units [Option ID = 17888]

23) Which of the following membrane separation technique would be most suitable for partial desalination of whey in dairy industry?[Question ID = 4473][Question Description = 123_50_DAI_SEP22_Q23]

1. Reverse osmosis [Option ID = 17889]

2. Nano filtration [Option ID = 17890]
3. Ultra filtration [Option ID = 17891]
4. Membrane filtration [Option ID = 17892]

24) In a food processing plant, a brine solution is heated from - 12 degree Celsius to - 65 degree Celsius in a double pipe parallel flow heat exchanger by water entering at 35 degree Celsius and leaving at 20.5 degree Celsius. Let the rate of flow is 9 kg/min. Estimate the area of heat exchanger for an overall heat transfer coefficient of 860 W/m² K. For water $c_p = 4.186 \times 10^3$ J/kg K[Question ID = 4474][Question Description = 124_50_DAI_SEP22_Q24]

1. 1.293 m² [Option ID = 17893]
2. 0.293 m² [Option ID = 17894]
3. 7.293 m² [Option ID = 17895]
4. 8.293 m² [Option ID = 17896]

25) A riveted joint does not fail by _____ of rivets.

- (I) Tearing
- (II) Shearing
- (III) Tearing of the plate across a row
- (IV) None of the above

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

[Question ID = 4475][Question Description = 125_50_DAI_SEP22_Q25]

1. (I), (II) and (III) [Option ID = 17897]
2. (I) and (II) only [Option ID = 17898]
3. (I) and (III) only [Option ID = 17899]
4. (IV) only [Option ID = 17900]

26) What is Air Conditioning?

- (I) Air Conditioning is the process of adding heat and increasing the humidity
- (II) Air Conditioning is the process of removing heat and controlling the humidity of air in a closed space
- (III) Air Conditioning is the process of controlling air moisture in an open area by adding heat

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

[Question ID = 4476][Question Description = 126_50_DAI_SEP22_Q26]

1. (I) and (III) only
[Option ID = 17901]
2. (I) only
[Option ID = 17902]
3. (III) only
[Option ID = 17903]
4. (II) only
[Option ID = 17904]

27) Solenoid Valve is a[Question ID = 4477][Question Description = 127_50_DAI_SEP22_Q27]

1. Sensor [Option ID = 17905]
2. Controller [Option ID = 17906]
3. Control Device [Option ID = 17907]
4. Comparator [Option ID = 17908]

28) Requirement of condenser can possibly be avoided by use of[Question ID = 4478][Question Description = 128_50_DAI_SEP22_Q28]

1. Multi effect evaporator [Option ID = 17909]
2. Preheaters [Option ID = 17910]
3. TVR [Option ID = 17911]
4. MVR [Option ID = 17912]

29) The separation limit for a membrane is determined by the lowest _____ that can be separated.[Question ID = 4479][Question Description = 129_50_DAI_SEP22_Q29]

1. Fractional weight [Option ID = 17913]
2. Molecular weight [Option ID = 17914]
3. Ion weight [Option ID = 17915]
4. Mass [Option ID = 17916]

30) Some examples of heat exchanger are

- (I) Condensers and evaporators in refrigeration units
 (II) Evaporator of an ice plant and milk chiller of a pasteurizing plant
 (III) Automobile radiators and oil coolers of heat engines

Identify the correct answer

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

[Question ID = 4480][Question Description = 130_50_DAI_SEP22_Q30]

1. (I), (II) and (III) [Option ID = 17917]
2. (I) and (II) only [Option ID = 17918]
3. (I) and (III) only [Option ID = 17919]
4. (II) and (III) only [Option ID = 17920]

31) Match List I with List II

Laws	Physical properties
A. Raoult's Law	I. Electrode potential
B. Stokes law	II. Equivalent conductance
C. Kohlrausch's Law	III. Scattering of light by colloidal solution
D. Nernst equation	IV. Creaming phenomenon
	V. Vapour pressure of solution

Choose the correct answer from the options given below:

[Question ID = 4481][Question Description = 131_50_DAI_SEP22_Q31]

1. A - V, B - IV, C - II, D - I [Option ID = 17921]
2. A - V, B - IV, C - III, D - I [Option ID = 17922]
3. A - II, B - IV, C - V, D - I [Option ID = 17923]
4. A - II, B - III, C - V, D - I [Option ID = 17924]

32) _____ is used to estimate the fat content in cream

[Question ID = 4482][Question Description = 132_50_DAI_SEP22_Q32]

1. Stalagmeter [Option ID = 17925]
2. Butyrometer [Option ID = 17926]
3. Butyro-refractometer [Option ID = 17927]
4. Pycnometer [Option ID = 17928]

33) Triacylglycerols of milk fat can crystallize predominantly in _____ polymorphic forms[Question ID = 4483][Question Description = 133_50_DAI_SEP22_Q33]

1. α [Option ID = 17929]
2. α' [Option ID = 17930]
3. β [Option ID = 17931]
4. β' [Option ID = 17932]

34) Read the following statements about cow's milk allergy (CMA)

- A. CMA is an inflammatory response to milk proteins.
- B. It is distinct from lactose intolerance.
- C. CMA is more prevalent in infants than in adults.
- D. The dominant immunological mechanisms driving allergic reactions change with age.
- E. Non-IgE-mediated reactions common in infancy and IgE-mediated reactions dominating in adults.

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

[Question ID = 4484][Question Description = 134_50_DAI_SEP22_Q34]

1. A, B, C and D only [Option ID = 17933]
2. A, B, C and E only [Option ID = 17934]
3. B, C, D and E only [Option ID = 17935]
4. C, D and E only [Option ID = 17936]

35) Hehner test is used for detection of _____ in milk[Question ID = 4485][Question Description = 135_50_DAI_SEP22_Q35]

1. Hydrogen peroxide [Option ID = 17937]
2. Sodium chloride [Option ID = 17938]
3. Formalin [Option ID = 17939]
4. Anionic detergent [Option ID = 17940]

36) Given below are two statements

Statement I: Flame photometer is very useful to detect the alkali and alkaline earth metals from the colour of the flame.

Statement II: Flame photometer is used in analysis for the determination of Na, K, Ca & Fe in biological samples.

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

[Question ID = 4486][Question Description = 136_50_DAI_SEP22_Q36]

1. Both Statement I and Statement II are true [Option ID = 17941]
2. Both Statement I and Statement II are false [Option ID = 17942]
3. Statement I is true but Statement II is false [Option ID = 17943]
4. Statement I is false but Statement II is true [Option ID = 17944]

37) In $500 \times g$, what does this represent in accordance to centrifugation?[Question ID = 4487][Question Description = 137_50_DAI_SEP22_Q37]

1. Gravitational force [Option ID = 17945]
2. Centrifugal force is 500 times greater than earthly gravitational force [Option ID = 17946]
3. Centrifugal force is 500 times less than earthly gravitational force [Option ID = 17947]
4. It is the same as the speed of the rotor in rpm [Option ID = 17948]

38) Tandem mass spectroscopy combines which of the following devices?[Question ID = 4488][Question Description = 138_50_DAI_SEP22_Q38]

1. Mass spectrometer and gas-solid chromatography [Option ID = 17949]
2. Mass spectrometer and gas-liquid chromatography [Option ID = 17950]
3. Mass spectrometer and liquid chromatography [Option ID = 17951]
4. Mass spectrometer and Mass spectrometer [Option ID = 17952]

39) What is correct statement about accuracy in analytical measurement?

[Question ID = 4489][Question Description = 139_50_DAI_SEP22_Q39]

1. A measure of how often an experimental value can be repeated [Option ID = 17953]
2. The number of significant figures used in a measurement [Option ID = 17954]
3. The closeness of a measured value to the real value [Option ID = 17955]
4. It represents degree of reproducibility [Option ID = 17956]

40) How many acts were merged to enact Food Safety and Standards Act, 2006

[Question ID = 4490][Question Description = 140_50_DAI_SEP22_Q40]

1. 6 [Option ID = 17957]
2. 7 [Option ID = 17958]
3. 5 [Option ID = 17959]
4. 9 [Option ID = 17960]

41) Ingestion of performed toxin in food give rise to

[Question ID = 4491][Question Description = 141_50_DAI_SEP22_Q41]

1. Food infection
[Option ID = 17961]
2. Food intoxication
[Option ID = 17962]
3. Food toxico-infection
[Option ID = 17963]
4. Food Allergy
[Option ID = 17964]

42) Which of the following bacteria belongs to coliforms entering through fecal contamination?[Question ID = 4492]
[Question Description = 142_50_DAI_SEP22_Q42]

1. *Escherichia coli* [Option ID = 17965]
2. *Enterobacter aerogenes* [Option ID = 17966]
3. *Salmonella* [Option ID = 17967]
4. *Shigella* [Option ID = 17968]

43) Which of the following bacteria are known to be food intoxicants?

- A. *Staphylococcus aureus*
- B. *Listeria monocytogenes*

C. *Clostridium botulinum*

D. *Salmonella* species

Choose the *correct* answer from the options given below

[Question ID = 4493][Question Description = 143_50_DAI_SEP22_Q43]

1. A and B [Option ID = 17969]
2. A and C [Option ID = 17970]
3. C and D [Option ID = 17971]
4. B and D [Option ID = 17972]

44) Arrange following fatty acids, in descending order of relative rate of oxidations

A. Stearic acid

B. Oleic acid

C. Linoleic acid

D. Linolenic acid

Choose the *correct* answer from the options given below

[Question ID = 4494][Question Description = 144_50_DAI_SEP22_Q44]

1. B, D, C, A [Option ID = 17973]
2. D,C,B, A [Option ID = 17974]
3. D,C, A, B [Option ID = 17975]
4. C, D, B, A [Option ID = 17976]

45) What is the correct ascending order of rays with respect to their wavelength

A. Gamma

B. Visible

C. Microwave

D. X rays

E. Radiowaves

Choose the *correct* answer from the options given below

[Question ID = 4495][Question Description = 145_50_DAI_SEP22_Q45]

1. E, C, A, B, D [Option ID = 17977]
2. E, C, B, D, A [Option ID = 17978]
3. E, C, D, A, B [Option ID = 17979]
4. E, D, C, B, A [Option ID = 17980]

46) Match List I with List II

List I	List II
Bacterial pathogens	Selective plating medium
A. <i>Bacillus cereus</i>	I. Xylose lysine deoxycholate citrate agar
B. <i>Listeria monocytogenes</i>	II. Baird Parker agar
C. <i>Staphylococcus aureus</i>	III. Mannitol egg yolk polymyxin agar
D. <i>Salmonella</i>	IV. PALCAM agar
	V. VRBA

Choose the correct answer from the options given below:

[Question ID = 4496][Question Description = 146_50_DAI_SEP22_Q46]

1. A - I, B - II, C - III, D - IV [Option ID = 17981]
2. A -III, B - IV, C - II, D - I [Option ID = 17982]
3. A-II, B - III, C - IV, D - V [Option ID = 17983]
4. A - V, B - IV, C -III, D - I [Option ID = 17984]

47) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Khoa and khoa-based sweets are more prone to *Staphylococcus aureus* contamination and food poisoning problems

Reason R: Human handlers are directly involved in the preparation of khoa and khoa-based sweets

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

[Question ID = 4497][Question Description = 147_50_DAI_SEP22_Q47]

1. Both A and R are true and R is the correct explanation of A
[Option ID = 17985]
2. Both A and R are true but R is NOT the correct explanation of A
[Option ID = 17986]
3. A is true but R is false
[Option ID = 17987]
4. A is false but R is true
[Option ID = 17988]

48) Given below are two statements

Statement I: Clean milk is not always safe for consumption

Statement II: Milk is a carrier of potentially pathogenic bacteria

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

[Question ID = 4498][Question Description = 148_50_DAI_SEP22_Q48]

1. Both Statement I and Statement II are correct [Option ID = 17989]
2. Both Statement I and Statement II are incorrect [Option ID = 17990]
3. Statement I is correct but Statement II is incorrect [Option ID = 17991]
4. Statement I is incorrect but Statement II is correct [Option ID = 17992]

49) The enzyme responsible for bitty cream defects in cream [Question ID = 4499][Question Description = 149_50_DAI_SEP22_Q49]

1. Phospholipase [Option ID = 17993]
2. Lipase [Option ID = 17994]
3. Esterase [Option ID = 17995]
4. Proteases [Option ID = 17996]

50) What are the IMViC test results for *E.coli*? [Question ID = 4500][Question Description = 150_50_DAI_SEP22_Q50]

1. +++- [Option ID = 17997]
2. -++- [Option ID = 17998]
3. --+- [Option ID = 17999]
4. -+++ [Option ID = 18000]

Topic:- 36 Dairy Microbiology_PHD

1) Who was the scientist responsible for the development of the Anthrax attenuated vaccine? [Question ID = 4601]
[Question Description = 101_47_DAM_SEP22_Q01]

1. Pasteur and Chamberland [Option ID = 18401]
2. Pasteur and Jenner [Option ID = 18402]
3. Chamberland and Koch [Option ID = 18403]
4. Koch and Leeuwenhoek [Option ID = 18404]

2) Classification scheme based on difference in morphology is known as [Question ID = 4602][Question Description = 102_47_DAM_SEP22_Q02]

1. Species [Option ID = 18405]
2. Strain [Option ID = 18406]
3. Biovars [Option ID = 18407]
4. Morphovars [Option ID = 18408]

3) Given below are two statements

Statement I: *Myxococcus Xanthus* exhibits both gliding and twitching motility

Statement II: *Myxococcus Xanthus* uses PMF and types IV pili for twitching and gliding motility, respectively

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

[Question ID = 4603][Question Description = 103_47_DAM_SEP22_Q03]

1. Both Statement I and Statement II are correct [Option ID = 18409]
2. Both Statement I and Statement II are incorrect [Option ID = 18410]
3. Statement I is correct but Statement II is incorrect [Option ID = 18411]
4. Statement I is incorrect but Statement II is correct [Option ID = 18412]

4) Which of the following microscope is used for studying motility, the shape of living cells, endospores, and inclusion bodies in bacterial cells?[Question ID = 4604][Question Description = 104_47_DAM_SEP22_Q04]

1. Differential interference contrast microscopy [Option ID = 18413]
2. Phase-contrast microscopy [Option ID = 18414]
3. Fluorescent microscopy [Option ID = 18415]
4. Electron Microscopy [Option ID = 18416]

5) EMB agar is a medium used in the identification and isolation of pathogenic bacteria. It contains digested meat proteins as a source of organic nutrients. Two indicator dyes, eosin, and methylene blue inhibit the growth of gram-positive bacteria and distinguish between lactose fermenting and non-lactose fermenting organisms. Lactose fermenters form metallic green or deep purple colonies, whereas the non-lactose fermenters form completely colorless colonies. EMB agar is an example of which of the following?[Question ID = 4605][Question Description = 105_47_DAM_SEP22_Q05]

1. a selective medium only [Option ID = 18417]
2. a differential medium only [Option ID = 18418]
3. a selective medium and a chemically defined medium [Option ID = 18419]
4. a selective medium, a differential medium, and a complex medium [Option ID = 18420]

6) Match List I with List II

Class of Enzyme	Reaction Mechanism
A. Transferases	I. Reaction involving isomerization
B. Lyases	II. Transfer of chemical groups
C. Ligase	III. Breaking of C-C, C-o, C-N
D. Isomerase	IV. Joining of two molecules by ATP
	V. Hydrolysis of molecules

Choose the correct answer from the options given below:

[Question ID = 4606][Question Description = 106_47_DAM_SEP22_Q06]

1. A - II, B - III, C - IV, D - I [Option ID = 18421]
2. A - I, B - III, C - IV, D - V [Option ID = 18422]
3. A - IV, B - V, C - I, D - II [Option ID = 18423]
4. A - V, B - I, C - II, D - III [Option ID = 18424]

7) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A: In a hypertonic solution, a bacterial cell shrinks

Reason R : Due to plasmolysis in hypertonic solution, water moves out of the cells

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

[Question ID = 4607][Question Description = 107_47_DAM_SEP22_Q07]

1. Both A and R are true and R is the correct explanation of A [Option ID = 18425]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 18426]
3. A is true but R is false [Option ID = 18427]
4. A is false but R is true [Option ID = 18428]

8) How did the A form of DNA differ from the B form of DNA?[Question ID = 4608][Question Description = 108_47_DAM_SEP22_Q08]

1. 11 bp/ helical turn in A form [Option ID = 18429]
2. 10.5 bp/helical turn in A form [Option ID = 18430]
3. 9 bp/ helical turn in A form [Option ID = 18431]
4. 7.5bp/ helical turn in A form [Option ID = 18432]

9) The lac repressor binds to:

- A. RNA polymerase
- B. Lactose
- C. The operator
- D. The Promoter
- E. β -galactosidase

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

[Question ID = 4609][Question Description = 109_47_DAM_SEP22_Q09]

1. A, B and E only [Option ID = 18433]

2. A and C only [Option ID = 18434]
3. B and C only [Option ID = 18435]
4. B and D only [Option ID = 18436]

10) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R
Assertion A : Mutations are necessary for the survival of the species

Reason R : Lack of mutation gives a temporary advantage to a species in an unchanged environment

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

[Question ID = 4610][Question Description = 110_47_DAM_SEP22_Q10]

1. Both A and R are true and R is the correct explanation of A [Option ID = 18437]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 18438]
3. A is true but R is false [Option ID = 18439]
4. A is false but R is true [Option ID = 18440]

11) Plasmid confers phenotypes to the host organisms, some of the plasmids to which these phenotypic traits have not yet been ascribed are called as [Question ID = 4611][Question Description = 111_47_DAM_SEP22_Q11]

1. Unique plasmids [Option ID = 18441]
2. Resistance plasmids [Option ID = 18442]
3. Q-plasmids [Option ID = 18443]
4. Cryptic plasmids [Option ID = 18444]

12) Diagnostic DNA probes have been developed for

- A. *Mycobacterium tuberculosis*
- B. *Lactobacillus* species
- C. Hepatitis B virus
- D. HIV
- E. *Listeria monocytogenes*

Choose the *correct* answer from the options given below

[Question ID = 4612][Question Description = 112_47_DAM_SEP22_Q12]

1. A, B, and C only [Option ID = 18445]
2. A, C, and D only [Option ID = 18446]
3. A, B, and E only [Option ID = 18447]
4. C, D, and E only [Option ID = 18448]

13) Match List I with List II

List I	List II
Enzyme	Mechanism
A. DNA ligase	I. Removes mRNA from DNA-RNA heteroduplex
B. DNA polymerase	II. Hydrolyses the phosphodiester bond
C. Nuclease	III. Joins the DNA fragments with cloning vector
D. RNase-H	IV. Synthesize nucleotide complementary to template
	V. Methylation

Choose the correct answer from the options given below:

[Question ID = 4613][Question Description = 113_47_DAM_SEP22_Q13]

1. A - I, B - II, C - III, D - IV [Option ID = 18449]
2. A - II, B - III, C - IV, D - V [Option ID = 18450]
3. A - III, B - IV, C - II, D - I [Option ID = 18451]
4. A - IV, B - V, C - I, D - II [Option ID = 18452]

14) What would be the effect on the PCR reaction if any of the following circumstances arose: 1) there are no primers in the reaction, 2) there are no dNTPs in the reaction, 3) there is no Taq polymerase in the reaction? [Question ID = 4614]

[Question Description = 114_47_DAM_SEP22_Q14]

1. PCR would proceed normally [Option ID = 18453]
2. Non-specific PCR of random templates will occur [Option ID = 18454]
3. The reaction will cease after a few cycles [Option ID = 18455]
4. The PCR reaction will not commence [Option ID = 18456]

15) Which of the following *Lactobacillus* species produces gas from glucose?[Question ID = 4615][Question Description = 115_47_DAM_SEP22_Q15]

1. *Lactobacillus acidophilus* [Option ID = 18457]
2. *Lactobacillus casei* [Option ID = 18458]
3. *Lactobacillus curvatus* [Option ID = 18459]
4. *Lactobacillus fermentum* [Option ID = 18460]

16) Which of the following yeast causes mastitis in dairy animals?[Question ID = 4616][Question Description = 116_47_DAM_SEP22_Q16]

1. *Cryptococcus neoformans* [Option ID = 18461]
2. *Candida lipolytica* [Option ID = 18462]
3. *Torulopsis sphaerica* [Option ID = 18463]
4. *Torulopsis holmii* [Option ID = 18464]

17) Which of the following reason responsible for contamination of mold spores leads to production of mycotoxin (Aflatoxin M1) in milk?

[Question ID = 4617][Question Description = 117_47_DAM_SEP22_Q17]

1. Air and soil [Option ID = 18465]
2. Air and water [Option ID = 18466]
3. Soil and water [Option ID = 18467]
4. Soil and personnel [Option ID = 18468]

18) The Lactoperoxidase system is bactericidal for the following bacteria

- A. Group N streptococci
- B. Group B streptococci
- C. Group A streptococci
- D. *Escherichia coli*
- E. *Salmonella typhimurium*

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

[Question ID = 4618][Question Description = 118_47_DAM_SEP22_Q18]

1. A, B and D only
[Option ID = 18469]
2. A, B and C only
[Option ID = 18470]
3. C, D and E only
[Option ID = 18471]
4. A, B and E only
[Option ID = 18472]

19) Match List I with List II

List I	List II
Defect	Chemical Compound
A. Ropiness	I. Peptides
B. Bitterness	II. 3-methyl butanol
C. Multi-flavour	III. Mucins
D. Unclean flavour	IV. Dimethyl sulphide
	V. 2-methyl alkyl hydrazine

Choose the correct answer from the options given below:

[Question ID = 4619][Question Description = 119_47_DAM_SEP22_Q19]

1. A - II, B - III, C - IV, D - V [Option ID = 18473]
2. A - III, B - I, C - II, D - IV [Option ID = 18474]
3. A - IV, B - V, C - I, D - II [Option ID = 18475]
4. A - I, B - II, C - III, D - IV [Option ID = 18476]

20) Given below are two statements

Statement I: Lactanin concentration in milk varies in concentration among different fractions

Statement II: Bovine colostrum is richer in L2 Lactanin and normal milk contains higher amount of L1 Lactanin

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

[Question ID = 4620][Question Description = 120_47_DAM_SEP22_Q20]

1. Both Statement I and Statement II are correct [Option ID = 18477]
2. Both Statement I and Statement II are incorrect [Option ID = 18478]
3. Statement I is correct but Statement II is incorrect [Option ID = 18479]
4. Statement I is incorrect but Statement II is correct [Option ID = 18480]

21) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A :Building up of thermoduric and thermophilic microbial pockets in certain improperly maintained parts in a pasteurizer is possible

Reason R : Improperly cleaning of pasteurizer may leads to formation of milk stone and residues leads to microbial pockets development causing contamination of subsequent batches

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

[Question ID = 4621][Question Description = 121_47_DAM_SEP22_Q21]

1. Both A and R are true and R is the correct explanation of A
[Option ID = 18481]
2. Both A and R are true but R is NOT the correct explanation of A
[Option ID = 18482]
3. A is true but R is false
[Option ID = 18483]
4. A is false but R is true
[Option ID = 18484]

22) Which among the following is the most appropriate reason for storing green coloured apples at low temperatures?

[Question ID = 4622][Question Description = 122_47_DAM_SEP22_Q22]

1. The rates of respiration and photosynthesis are reduced [Option ID = 18485]
2. The rate of respiration is reduced [Option ID = 18486]
3. The rate of photosynthesis is reduces [Option ID = 18487]
4. Complete inhibition of Respiration and photosynthesis [Option ID = 18488]

23) The process creates free radicals in food that can destroy cell membrane, attack DNA and proteins leads to inhibition of growth of microorganisms is known as

[Question ID = 4623][Question Description = 123_47_DAM_SEP22_Q23]

1. Pasteurization [Option ID = 18489]
2. Irradiation [Option ID = 18490]
3. Ultrasonication [Option ID = 18491]
4. Sterilization [Option ID = 18492]

24) Which chemical is used to inhibit mold growth in bread?[Question ID = 4624][Question Description = 124_47_DAM_SEP22_Q24]

1. Benzoates [Option ID = 18493]
2. Nitrates [Option ID = 18494]
3. Sorbates [Option ID = 18495]
4. Lactates [Option ID = 18496]

25) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Yeasts such as *Saccharomyces cerevisiae* are used in baking industry.

Reason R : Carbon dioxide produced during fermentation causes bread dough to rise by thermal expansion.

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

[Question ID = 4625][Question Description = 125_47_DAM_SEP22_Q25]

1. Both A and R are true and R is the correct explanation of A [Option ID = 18497]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 18498]
3. A is true but R is false [Option ID = 18499]
4. A is false but R is true [Option ID = 18500]

26) Match List I with List II

List I	List II
A. Sauerkraut	I. <i>Aspergillus niger</i>
B. Koumiss	II. <i>Acetobacter acetii</i>
C. Tempe	III. <i>Leuconostoc mesenteroides</i>
D. Vinegar	IV. <i>Torulopsis</i>
	V. <i>Bacillus species</i>

Choose the correct answer from the options given below:

[Question ID = 4626][Question Description = 126_47_DAM_SEP22_Q26]

1. A - II, B - III, C - IV, D - V [Option ID = 18501]
2. A - III, B - IV, C - I, D - II [Option ID = 18502]
3. A - III, B - IV, C - V, D - I [Option ID = 18503]
4. A - IV, B - I, C - II, D - III [Option ID = 18504]

27) Given below are two statements

Statement I: Angiotensin-converting enzyme (ACE) is a peptidyl di-peptidase enzyme stimulates the release of aldosterone leads to increase in concentration of sodium in blood leads to high blood pressure

Statement II: Antihyper-tensive peptides are ACE inhibitors consisting of di or tripeptides with proline, lysine or arginine in the N terminal end

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

[Question ID = 4627][Question Description = 127_47_DAM_SEP22_Q27]

1. Both Statement I and Statement II are correct
[Option ID = 18505]
2. Both Statement I and Statement II are incorrect
[Option ID = 18506]
3. Statement I is correct but Statement II is incorrect
[Option ID = 18507]
4. Statement I is incorrect but Statement II is correct
[Option ID = 18508]

28) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Probiotics are live microbial food supplements used in the preparation of fermented food products that provides health banefits

Reason R : *Bifidobacterium bifidum* bacteria improves the absorption of calcium and iron in Gastrointestinal track

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

[Question ID = 4628][Question Description = 128_47_DAM_SEP22_Q28]

1. Both A and R are true and R is the correct explanation of A
[Option ID = 18509]
2. Both A and R are true but R is NOT the correct explanation of A
[Option ID = 18510]
3. A is true but R is false
[Option ID = 18511]
4. A is false but R is true
[Option ID = 18512]

29) Disdavantage of using mixed strain starter culture in the preparation of fermented milk is

[Question ID = 4629][Question Description = 129_47_DAM_SEP22_Q29]

1. Attacked by Bacteriophages [Option ID = 18513]
2. Dominant strains after few transfer [Option ID = 18514]
3. Affected by antibiotic residues [Option ID = 18515]
4. Quality of fermented milk may be affected [Option ID = 18516]

30) Which of the following lactic acid bacteria produces only "L" form of Lactic acid?

[Question ID = 4630][Question Description = 130_47_DAM_SEP22_Q30]

1. Lactobacillus

[Option ID = 18517]

2. Pediococcus

[Option ID = 18518]

3. Leuconostoc

[Option ID = 18519]

4. Bifidobacteria

[Option ID = 18520]

31) Which among the following test may be used for the differentiation of *Lactococcus lactis* and *Lactococcus cremoris*?

[Question ID = 4631][Question Description = 131_47_DAM_SEP22_Q31]

1. CO₂ in milk [Option ID = 18521]

2. Diacetyl in milk [Option ID = 18522]

3. NH₃ from arginine [Option ID = 18523]

4. Bacteriocin production [Option ID = 18524]

32) Match List I with List II

List I	List II
A. Acid-alcohol fermented milk	I. Yoghurt
B. High-acid fermented milk	II. Cultured Butter milk
C. Medium-acid fermented milk	III. Skyr
D. Low acid fermented milk	IV. Bulgarian sour milk
	V. Koumiss

Choose the correct answer from the options given below:

[Question ID = 4632][Question Description = 132_47_DAM_SEP22_Q32]

1. A - II, B - III, C - IV, D - V [Option ID = 18525]

2. A - III, B - II, C - I, D - IV [Option ID = 18526]

3. A - IV, B - V, C - I, D - II [Option ID = 18527]

4. A - V, B - IV, C - I, D - II [Option ID = 18528]

33) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Yoghurt is the end product of a symbiotic interaction of *Streptococcus thermophilus* and *Lactobacillus bulgaricus* growing at a temperature range of 40-45° C

Reason R: Numerous amino acids are liberated from casein by proteases produced by *Streptococcus thermophilus* stimulates the growth of *Lactobacillus bulgaricus*

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

[Question ID = 4633][Question Description = 133_47_DAM_SEP22_Q33]

1. Both A and R are true and R is the correct explanation of A

[Option ID = 18529]

2. Both A and R are true but R is NOT the correct explanation of A

[Option ID = 18530]

3. A is true but R is false

[Option ID = 18531]

4. A is false but R is true

[Option ID = 18532]

34) Given below are two statements

Statement I: Pasteurized milk used in the preparation of cheese exhibits slower ripening

Statement II: Heat treatment inactivates milk associated bacteria and enzymes

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

[Question ID = 4634][Question Description = 134_47_DAM_SEP22_Q34]

1. Both Statement I and Statement II are correct [Option ID = 18533]

2. Both Statement I and Statement II are incorrect [Option ID = 18534]

3. Statement I is correct but Statement II is incorrect [Option ID = 18535]

4. Statement I is incorrect but Statement II is correct [Option ID = 18536]

35) Which of the following salt is legally permitted in some parts of the world to be used in the preparation of certain cheeses to inhibit the *Clostridium tyrobutyricum* spoilage organisms?

[Question ID = 4635][Question Description = 135_47_DAM_SEP22_Q35]

1. NaNO₃
[Option ID = 18537]
2. NaCl
[Option ID = 18538]
3. CaCl₂
[Option ID = 18539]
4. KCl and *Clostridium tyrobutyricum*
[Option ID = 18540]

36) Which of the following Bacterial pathogen is a major concern in spray dried milk powder enter through bird faecal droppings?[Question ID = 4636][Question Description = 136_47_DAM_SEP22_Q36]

1. Salmonella [Option ID = 18541]
2. *Escherichia coli* [Option ID = 18542]
3. *Listeria monocytogenes* [Option ID = 18543]
4. *Campylobacter jejuni* [Option ID = 18544]

37) Given below are two statements

Statement I: Survival rate of bacteria in spray drying process is comparatively higher thus leading to higher bacterial count in final powder

Statement II: More concern of existence of Microbiological hazard within the spray drying chamber if rotary atomizer is used

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

[Question ID = 4637][Question Description = 137_47_DAM_SEP22_Q37]

1. Both Statement I and Statement II are correct [Option ID = 18545]
2. Both Statement I and Statement II are incorrect [Option ID = 18546]
3. Statement I is correct but Statement II is incorrect [Option ID = 18547]
4. Statement I is incorrect but Statement II is correct [Option ID = 18548]

38) Match List I with List II

List I	List II
A. <i>Cronobacter sakazakii</i>	I. Raw milk
B. <i>Listeria monocytogenes</i>	II. Raw milk prepared semi-soft cheese
C. <i>Salmonella enteritidis</i>	III. Egg products used in ice-cream
D. <i>E.coli</i> O157:H7	IV. Dehumidifier in infant milk food production
	V. Khoa based sweets

Choose the correct answer from the options given below:

[Question ID = 4638][Question Description = 138_47_DAM_SEP22_Q38]

1. A - I, B - II, C - III, D - IV [Option ID = 18549]
2. A - II, B - III, C - IV, D - V [Option ID = 18550]
3. A - IV, B - III, C - II, D - I [Option ID = 18551]
4. A - IV, B - V, C - I, D - II [Option ID = 18552]

39) Which of the following virulence protein present in *Listeria monocytogenes* is responsible for Listeriosis in humans?

[Question ID = 4639][Question Description = 139_47_DAM_SEP22_Q39]

1. Internalin A
[Option ID = 18553]
2. Fibrinogen binding protein
[Option ID = 18554]
3. Enterotoxin
[Option ID = 18555]
4. Endotoxin
[Option ID = 18556]

40) Which of the following microbial count may increase in the cream wherein it was manufactured under poor hygiene but

stored at low temperature?

[Question ID = 4640][Question Description = 140_47_DAM_SEP22_Q40]

1. High total plate and coliform counts
[Option ID = 18557]
2. Low total plate count but high coliform counts
[Option ID = 18558]
3. Low total and coliform but high yeast
[Option ID = 18559]
4. Low total and coliform but high mould
[Option ID = 18560]

41) Which of the following concept being followed in quality, food safety and environmental management system?

[Question ID = 4641][Question Description = 141_47_DAM_SEP22_Q41]

1. PDCA
[Option ID = 18561]
2. Six Sigma
[Option ID = 18562]
3. Kiazen
[Option ID = 18563]
4. 5S process
[Option ID = 18564]

42) If you are in the quality assurance department and you find a Khoa and Khoa-based sweet sample exceeds the value c (≥ 1) when it was analyzed for *Listeria monocytogenes*, then what would be your reaction according to the FSSAI sampling plan?

[Question ID = 4642][Question Description = 142_47_DAM_SEP22_Q42]

1. Acceptable [Option ID = 18565]
2. Unacceptable [Option ID = 18566]
3. Satisfactory [Option ID = 18567]
4. Marginally acceptable [Option ID = 18568]

43) During enumeration of coagulase positive *Staphylococcus aureus* on Baird Parker Agar (BPA) if you found a two different colonies of typical and atypical characteristics, then what would be your further identification test for its confirmation?

[Question ID = 4643][Question Description = 143_47_DAM_SEP22_Q43]

1. Coagulase and DNase test [Option ID = 18569]
2. OF test [Option ID = 18570]
3. Hippurate hydrolysis test [Option ID = 18571]
4. Sugar utilization test [Option ID = 18572]

44) The biochemical property used in the identification of Enterobacteriaceae count in milk and milk products using VRBGA is

- A. Utilization of glucose
- B. Oxidase enzyme activity
- C. Amino acid degradation
- D. Catalase enzyme activity
- E. Lactose utilization

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

[Question ID = 4644][Question Description = 144_47_DAM_SEP22_Q44]

1. A and B only [Option ID = 18573]
2. A and C only [Option ID = 18574]
3. A and D only [Option ID = 18575]
4. A and E only [Option ID = 18576]

45) Match List I with List II

List I	List II
A. Violet red bile glucose agar	I. <i>Salmonella</i>
B. Tergitol-7 agar	II. <i>Cronobacter sakazakii</i>
C. Hecktoen Entric agar	III. <i>Escherichia coli</i>
D. Druggan-Forsythe-Iversen agar	IV. Enterobacteriaceae
	V. <i>Campylobacter jejuni</i>

Choose the correct answer from the options given below:

[Question ID = 4645][Question Description = 145_47_DAM_SEP22_Q45]

1. A - II, B - III, C - IV, D - V [Option ID = 18577]
2. A - III, B - IV, C - V, D - I [Option ID = 18578]
3. A - IV, B - III, C - I, D - II [Option ID = 18579]
4. A - V, B - I, C - II, D - III [Option ID = 18580]

46) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Biosensors are helpful in the rapid detection of Bacterial pathogens in dairy products

Reason R: Optical-based biosensors can detect bacterial pathogens based on the binding interaction between antigen-antibody

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

[Question ID = 4646][Question Description = 146_47_DAM_SEP22_Q46]

1. Both A and R are true and R is the correct explanation of A [Option ID = 18581]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 18582]
3. A is true but R is false [Option ID = 18583]
4. A is false but R is true [Option ID = 18584]

47) Given below are two statements

Statement I: Biosafety level-3 containment used for handling of *Brucella* species

Statement II: *Brucella* species is a zoonotic pathogenic bacteria that causes tuberculosis in dairy animals

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

[Question ID = 4647][Question Description = 147_47_DAM_SEP22_Q47]

1. Both Statement I and Statement II are correct [Option ID = 18585]
2. Both Statement I and Statement II are incorrect [Option ID = 18586]
3. Statement I is correct but Statement II is incorrect [Option ID = 18587]
4. Statement I is incorrect but Statement II is correct [Option ID = 18588]

48) Which of the following is NOT required in surface fermentation?

[Question ID = 4648][Question Description = 148_47_DAM_SEP22_Q48]

1. Aeration [Option ID = 18589]
2. Baffles [Option ID = 18590]
3. Agitation [Option ID = 18591]
4. Stirrer [Option ID = 18592]

49) Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R

Assertion A: Fermentation occurs by the incomplete oxidation of glucose.

Reason R: Yeast forms ethanol & CO₂ from pyruvic acid.

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

[Question ID = 4649][Question Description = 149_47_DAM_SEP22_Q49]

1. Both A and R are true and R is the correct explanation of A [Option ID = 18593]
2. Both A and R are true but R is NOT the correct explanation of A [Option ID = 18594]
3. A is true but R is false [Option ID = 18595]
4. A is false but R is true [Option ID = 18596]

50) Match List I with List II

List I	List II
A. Ethanol	I. <i>E.coli</i>
B. Citric acid	II. <i>Penicillium</i>

C. Antibiotics	III. <i>Aspergillus niger</i>
D. Insulin	IV. <i>Saccharomyces cerevisiae</i>
	V. <i>Xanthomonas</i>

Choose the correct answer from the options given below:

[Question ID = 4650][Question Description = 150_47_DAM_SEP22_Q50]

1. A - II, B - III, C - IV, D - V [Option ID = 18597]
2. A - III, B - IV, C - V, D - I [Option ID = 18598]
3. A - IV, B - III, C - II, D - I [Option ID = 18599]
4. A - V, B - I, C - II, D - I [Option ID = 18600]