



Q-1 In fruit juices, UV light penetration is generally 1mm for the absorption of

- A 100% of light
B **90% of light**
C 80% of light
D 70% of light

Correct Answer : B

Q-2 Which of the given fruit is considered as Climacteric?

- A Pineapple
B **Sapota**
C Strawberry
D Pomegranate

Correct Answer : B

Q-3 Which of the enzyme can generally be used for the clarification?

- A Ribonuclease
B Lipase
C **cellulase**
D Any of these

Correct Answer : C

Q-4 The UV radiation comprises the application of radiation from electromagnetic spectrum. UV-A is categorised in the range of

- A 200-280nm
B 280-320nm
C **320-400nm**
D Any of these

Correct Answer : C

Q-5 In Pulsed electric field (PEF) processing of liquid foods, high voltage pulses are applied for the duration of

- A **milli to micro seconds**
B micro to nano seconds
C milli to nano seconds
D None of these

Correct Answer : A

Q-6 Terminal velocity is

- A **Invariable velocity with no acceleration**
B Variable velocity with no acceleration
C Invariable velocity with acceleration
D Variable velocity with acceleration

Correct Answer : A

Q-7 Heat transfer in liquids and gases is essentially due to

- A conduction
B radiation
C **Convection**
D Conduction, convection and radiation

Correct Answer : C

Q-8 Thermal processing of canned foods for C. botulinum, generally the ----- concept is considered.

- A 5D
B 8D

Q-9 If D is the radius of the globule, μ is the viscosity of milk, ρ_p and ρ_f are the density of milk and fat respectively, then which of the following equation is used for determination of rate of movement of fat globules in gravitational settling?

A $V = D^2 (\rho_p - \rho_f)g/18\mu$

B $V = D^2 (\rho_p - \rho_f)/9\mu$

C $V = D^2 (\rho_p - \rho_f)g/9\mu$

D $V = D^2 (\rho_p - \rho_f)g/18\mu$

Correct Answer : D

Q-10 The minimum space between discs in the centrifugal separation is

A 0.2 to 0.4mm

B 0.4 to 2mm

C 2 to 4mm

D 4 to 10mm

Correct Answer : B

Q-11 Modified Weber number, which is used to correlate homogenizing phenomenon when the flow behaviour is not known, is given by

A $\tau D/u$

B $\sigma/\tau D$

C $\tau D/\sigma$

D $u/\tau D$

Correct Answer : C

Q-12 A food gel requires a threshold level of stress to start the flow, and then it follows a linear stress-strain relationship. This type of fluid is referred as

A Pseudo plastic

B Bingham plastic

C Dilatant

D Thixotropic

Correct Answer : B

Q-13 A disc type centrifuge has milk inlet at radius R_m , cream outlet at radius R_1 and skim milk outlet at radius R_2 . In order to have a very high separation of milk fat globules from milk, the position of R_m should be

A close to R_1

B close to R_2

C In the middle of R_1 and R_2

D Nothing to do with the position

Correct Answer : A

Q-14 If a product having mass 'm' is rotated with an angular velocity ω , while the rpm of rotation is 'n' and distance of globule from the axis of rotation is 'R' then the acceleration A due to centrifugal force can be obtained from

A $A = g + m\omega^2$

B $A = 4\pi^2 n^2 R / (60)^2$

C $A = m\omega^2 - g$

D $A = 4\pi^2 n R^2/60$

Correct Answer : B

Q-15 The tensile force (F_t) required for rupturing agglomerate of diameter 'D', cross section area 'A' having an inter-particle porosity ' ϵ ' and average inter-particle force 'F' is given as

A $F_t = A\epsilon F / (1 - \epsilon)D^2$

B $F_t = (1 - \epsilon)D^2 F / A\epsilon$

C $F_t = A(1 - \epsilon)F / \epsilon D^2$

D $F_t = A(1 + \epsilon)F / \epsilon D^2$

Correct Answer : C

Q-16 Conduction through hollow, radial, one dimensional heat transfer is expressed as

A $2\pi l (T_1 + T_2) / k(r_2 - r_1)$

B $2\pi l \log_e(T_1/T_2) / k(r_2 - r_1)$

C $2\pi l (T_1 + T_2)K / \log_e(r_2/r_1)$

D $2\pi l (T_1 - T_2) / \log_e(r_2/r_1)$

Correct Answer : D

Q-17 The heat flow through a sphere of inner radius r_1 and outer radius r_2 is to be written in same form as that for heat flow through a plane wall for wall thickness $(r_2 - r_1)$, then equivalent mean radius for spherical shell is

A $(r_1 + r_2) / 2$

B $\sqrt{r_1 r_2}$

C $r_1 r_2$

D $(r_1 + r_2) / \log_e(r_1/r_2)$

Correct Answer : B

Q-18 Prandtl number is the ratio of

A **Momentum to thermal diffusivity**

B absolute viscosity to thermal diffusivity

C thermal diffusivity to kinematic viscosity

D inertial forces to viscous forces

Correct Answer : A

Q-19 The total radiant energy incident upon a surface (Q) in term of radiant energy absorbed (Q_a), radiant energy reflected (Q_r) and radiant energy transmitted (Q_t) by the surface can be expressed as

A $Q = Q_a + Q_r - Q_t$

B $Q = Q_a + Q_r / Q_t$

C **$Q = Q_a + Q_r + Q_t$**

D $Q = Q_a - Q_r + Q_t$

Correct Answer : C

Q-20 The approximate amount of steam required in a single effect evaporator to evaporate 1 lb of water from milk

A 0.6lb

B 0.8lb

C 1.0lb

D **1.2 lb**

Correct Answer : D

Q-21 The verification in HACCP does not involve

A Microbiological examination

B **Mock recall**

C Chemical examination D Random sampling
Correct Answer : B

Q-22 Risk analysis does not involve

- A Risk assessment B Risk communication
C Risk management **D Risk prevention**

Correct Answer : D

Q-23 ISO 9001:2015 have got

- A 10 clauses** B 8 clauses
C 6 clauses D 12 clauses

Correct Answer : A

Q-24 The manufacturing, testing and quality assurance guidelines to ensure safety of foods is generally covered under

- A GLP B GHP
C GMP D Any of these

Correct Answer : C

Q-25 The colorimeter generally works in the wavelength range of

- A 200 to 760 nm **B 400 to 760 nm**
C 400 to 560 nm D >760 nm

Correct Answer : B

Q-26 The red colour has got a wavelength of

- A 450-500nm B 500-570nm
C 590 -620nm **D 620-760nm**

Correct Answer : D

Q-27 The separation of different components of the volatile material in gas chromatography is due to the difference in

- A Molecular weight **B Conductivity**
C Molarity D Partition coefficients

Correct Answer : B

Q-28 Which of the following organization is considered as the founding member of ISO?

- A BIS** B FCI
C SEBI D FSSAI

Correct Answer : A

Q-29 Z value of 10°C is equal to

- A 50°C B 25°C
C 28°C **D 18°C**

Correct Answer : D

Q-30 In a commercial canning process, the heating is being done at 115°C for microbial reduction of 12 log cycles. The del factor is

- A **27.64** B 12
C 13.82 D 9.21

Correct Answer : A

Q-31 Which of the following is exempted to use +F logo under FSS regulation 2018?

- A Fortified rice B **Fortified Salt**
C Fortified wheat flour D Fortified oil

Correct Answer : B

Q-32 The plastic packaging containers are given numbers, which are also referred as recycling number. It gives guidance with respect to recycling. The number given to LDPE is

- A 1 B 2
C 3 D **4**

Correct Answer : D

Q-33 To provide freshness for a longer duration, wafers are packed with

- A Oxygen B Helium
C **Nitrogen** D Nitrous oxide

Correct Answer : C

Q-34 In eggs, green rots are chiefly caused by

- A **Pseudomonas fluorescens** B Lysteria monocytogens
C Cladosporium D All of these

Correct Answer : A

Q-35 In meat, black spot is mainly produced by

- A Rhizopus B **Cladosporium**
C Mucor D Thamnidium

Correct Answer : B

Q-36 The modified sugars, generally found in cell walls of Gram positive bacteria contain N- acetylglucosamine (NAG) and N-acetylmuramic acid (NAM). These are covalently linked by

- A β - (1,6) glycosidic bond B α - (1,6) glycosidic bond
C α - (1,4) glycosidic bond D **β - (1,4) glycosidic bond**

Correct Answer : D

Q-37 The reduction in off flavour of beer is practiced through

- A Invertase B Limoninase
C **Diacetyl reductase** D RNase

Correct Answer : C

Q-38 Enzymes degrade, alter or synthesize a food component through

- A Oxidation/reduction/isomerization
B hydrolysis / synthesis
C Group transfer
D **All of these**

Correct Answer : D

Q-39 Total solids in the water to be used in the preparation of fruit juice beverages, must not exceed to

- A **500ppm**
B 400ppm
C 300ppm
D 200ppm

Correct Answer : A

Q-40 Soft drinks are acidic, having pH of 2.5 to 4.0 with typical carbonation level of

- A 1 volume
B **3 volume**
C 6 volume
D 9 volume

Correct Answer : B

Q-41 Which of the following is generally used as an oilseed and as well as pulse?

- A Lentil
B Pigeon pea
C **soybean**
D Chickpea

Correct Answer : C

Q-42 As per FAO (1994), pulses are classified into

- A 9 codes
B 10 codes
C **11 codes**
D 12 codes

Correct Answer : C

Q-43 Which of the following is referred as pretreatment method?

- A Splitting
B Milling
C Polishing
D **None of these**

Correct Answer : D

Q-44 Melanoidins are the result of

- A **Maillard reaction**
B Carmelization
C Enzymatic browning
D All of these

Correct Answer : A

Q-45 Final stage of Maillard reaction covers

- A Condensation and dehydration
B Fragmentation
C Polymerisation
D **All of these**

Correct Answer : D

Q-46 During irradiation, the most susceptible component of colour is myoglobin, which is

- A Flavonoid
B Hydroxyl-carotenoid

C Metalloprotein

D Sulfo-amino acid

Correct Answer : C

Q-47 Colour change during irradiation is more pronounced in

A Whole meat

B Ground meat

C Equally pronounced in ground and whole meat

D Marinated meat

Correct Answer : B

Q-48 Ohmic heating is possible in foods when electric conductivity(σ) value is

A < 0.01 S/m

B > 10 S/m

C In between 0.01 - 10S/m

D < 5 S/m

Correct Answer : C

Q-49 The length: diameter ratio of the barrel for single screw extruder is in between

A 2:1 to 20:1

B 2:1 to 25:1

C 2:1 to 35:1

D 2:1 to 45:1

Correct Answer : B

Q-50 During the crystallization process, the cleaning action of _____ stops the encrustation of crystals and thereby ensures efficient heat transfer.

A vibrations

B cavitation

C shearing

D all of these

Correct Answer : B

Q-51 An amount is invested at 10% per annum compound interest for 2 years, and the interest earned is Rs. 840. What is the principal amount?

A Rs. 3500

B Rs. 4500

C Rs. 4000

D Rs. 5000

Correct Answer : C

Q-52 In covering a distance of 30 km, A takes 2 hours more than B. If A doubles his speed, then he would take 1 hour less than B. A's speed is:

A 5 km/h

B 7 km/h

C 9 km/h

D 10 km/h

Correct Answer : A

Q-53 Fill the blank in the middle of the following series.
SCD, TEF, UGH, _____, WKL

A CMN

B UJI

C VIJ

D IJT

Correct Answer : C

Q-54 The Chandrayaan 3 mission's rover is known as

- A PSLV **B Pragmaan**
C Dhruv D Vikram

Correct Answer : B

Q-55 We were very tired, So we _____ early.

- A Leave B Leaving
C Left D Lost

Correct Answer : C

Q-56 Consider the system of linear equations

$$x+2y-3z=-2,$$

$$3x-y+4z=3,$$

$$6x+5y+\lambda z=-3$$

where x,y,z are the variables and λ is a constant.

Then which one of the following is true ?

- A If $\lambda=5$, then system has unique solution **B If $\lambda=5$, then system has infinitely many solutions**
C If $\lambda=5$, then system has no solution D System is inconsistency for any value of λ

Correct Answer : B

Q-57 Evaluate double integral $\int_0^{\infty} \int_x^{\infty} \frac{e^{-y}}{y} dy dx$.

- A 0 **B 1**
C -2 D 2

Correct Answer : B

Q-58 Using Newton's iterative method with initial approximation $x_0 = 2$, the root of the equation $x^3 - 2x - 8 = 0$ after one iteration is

- A 2.40** B 2.33
C 2.12 D 2.50

Correct Answer : A

Q-59 Find the directional derivative of $F(x, y, z) = x^2yz + 4xz^2$ at $(1, -2, -1)$ in the direction of vector $2\hat{i} - \hat{j} - 2\hat{k}$.

- A 31/3 B 35/3
C 37/3 D 38/3

Correct Answer : C

Q-60 The general solution of the first order differential equation $\frac{dy}{dx} + 2y \tan x = \sin x$ is

A y
 $= \sin x$
 $+ k \cos^2 x$

C y
 $= \cos x$
 $+ k \sin^2 x$

B y
 $= \sin x$
 $+ k \sin^2 x$

D y
 $= \cos x$
 $+ k \cos^2 x$

Correct Answer : D



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