

Q.1 When a certain photosensitive surface is illuminated with monochromatic light of frequency ' ν ', the stopping potential for photoelectric current is $\frac{V_0}{3}$. When the same surface is illuminated by monochromatic light of frequency ' $\nu/3$ ' the stopping potential is ' V_0 '. The threshold frequency for photoelectric emission is

Ans

1. $\frac{3\nu}{5}$

2. $\frac{2\nu}{3}$

3. $\frac{3\nu}{2}$

4. $\frac{4\nu}{3}$

Question Type : MCQ

Question ID : 292995260

Option 1 ID : 2929951039

Option 2 ID : 2929951037

Option 3 ID : 2929951038

Option 4 ID : 2929951040

Status : Answered

Chosen Option : 2

Q.2 Which one of the following is NOT correct?

Ans 1. A real, inverted and same size image can be obtained by using concave mirror

2. A real, inverted and same size image can be obtained by using convex mirror

3. the size of the image formed by convex mirror is always smaller than size of the object

4. A virtual, erect, magnified image can be obtained by using concave mirror.

Question Type : MCQ

Question ID : 292995282



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Option 1 ID : 2929951128
Option 2 ID : 2929951126
Option 3 ID : 2929951127
Option 4 ID : 2929951125
Status : Answered
Chosen Option : 1

Q.3 A galvanometer of resistance 100Ω is connected to a battery of $2V$ with a resistance of 1900Ω in series. The deflection obtained is 30 divisions. To reduce this deflection by 10 divisions the additional resistance required to be connected in series is

- Ans
- 1. 1500Ω
 - 2. 500Ω
 - 3. 1000Ω
 - 4. 2000Ω

Question Type : MCQ
Question ID : 292995295
Option 1 ID : 2929951179
Option 2 ID : 2929951177
Option 3 ID : 2929951178
Option 4 ID : 2929951180
Status : Answered
Chosen Option : 1

Q.4 A transverse wave is travelling on a string with velocity ' V '. The extension in the string is ' x '. If the string is extended by 50%, then the speed of wave along the string will be nearly (Hooke's law is obeyed)

- Ans
- 1. $1.22 V$
 - 2. $\frac{V}{1.5}$
 - 3. $\frac{V}{1.22}$
 - 4. $1.5 V$

Question Type : MCQ
Question ID : 292995279
Option 1 ID : 2929951115
Option 2 ID : 2929951114
Option 3 ID : 2929951113
Option 4 ID : 2929951116
Status : Answered
Chosen Option : 2

Q.5

Glass has refractive index $\frac{3}{2}$ and water has refractive index $\frac{4}{3}$. If the speed of light in glass is 2×10^8 m/s, then the speed of light in water will be

- Ans
- 1. 1.6×10^8 m/s

✓² $2.25 \times 10^8 \text{ m/s}$

✗³ $1.8 \times 10^8 \text{ m/s}$

✗⁴ $2 \times 10^8 \text{ m/s}$

Question Type : MCQ

Question ID : 292995287

Option 1 ID : 2929951148

Option 2 ID : 2929951145

Option 3 ID : 2929951147

Option 4 ID : 2929951146

Status : Answered

Chosen Option : 3

Q.6 If the errors involved in the measurements of a side and mass of a cube are 2% and 4% respectively, what is the maximum permissible error in the density of the material ?

Ans ✗ 1.8 %

✗ 2.4 %

✗ 3.6 %

✓ 4.10 %

Question Type : MCQ

Question ID : 292995297

Option 1 ID : 2929951186

Option 2 ID : 2929951188

Option 3 ID : 2929951187

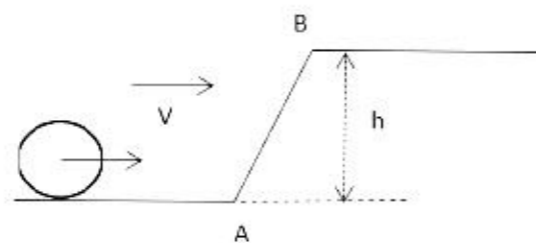
Option 4 ID : 2929951185

Status : Answered

Chosen Option : 3

Q.7

A solid sphere is rolling down a frictionless surface with translational velocity 'V'. It climbs the inclined plane from 'A' to 'B' and then moves away from 'B' on the smooth horizontal surface. The value of 'V' should be



Ans

✗¹ \sqrt{gh}

✓² $\geq \left[\frac{10gh}{7} \right]^{1/2}$

3. $> \sqrt{2gh}$

4. $\frac{10gh}{7}$

Question Type : MCQ

Question ID : 292995270

Option 1 ID : 2929951080

Option 2 ID : 2929951078

Option 3 ID : 2929951079

Option 4 ID : 2929951077

Status : Answered

Chosen Option : 1

Q.8 A wall is hit elastically and normally by ' n ' balls per second. If ' m ' is the mass and ' u ' is velocity for each molecule, the force exerted by the balls on the wall is

Ans 1. $2mnu$

2. $\frac{mnu}{2}$

3. mnu

4. mnu^2

Question Type : MCQ

Question ID : 292995269

Option 1 ID : 2929951075

Option 2 ID : 2929951073

Option 3 ID : 2929951074

Option 4 ID : 2929951076

Status : Answered

Chosen Option : 2

Q.9 If two non-zero vectors \vec{P} and \vec{Q} are perpendicular to each other then the magnitude of their vector product is ($\sin 90^\circ = \cos 0^\circ = 1$)

Ans 1. Q^2/P

2. PQ

3. \sqrt{QP}

4. P^2/Q

Question Type : MCQ

Question ID : 292995299

Option 1 ID : 2929951195

Option 2 ID : 2929951194

Option 3 ID : 2929951196

Option 4 ID : 2929951193

Status : Answered
Chosen Option : 2

Q.1 If the telecast is to cover a range of 64km, the height of TV tower should be (Radius of earth, $R=6400\text{Km}$)

- Ans
- 1. 100m
 - 2. 140m
 - 3. 320m
 - 4. 280m

Question Type : MCQ
Question ID : 292995259
Option 1 ID : 2929951033
Option 2 ID : 2929951034
Option 3 ID : 2929951036
Option 4 ID : 2929951035
Status : Answered
Chosen Option : 4

Q.1 The excess of pressure inside a soap bubble is twice the excess of pressure inside another soap bubble. The volume of first bubble is 'n' times the volume of second bubble. The value of 'n' must be

- Ans
- 1. 0.125
 - 2. 0.25
 - 3. 2
 - 4. 0.5

Question Type : MCQ
Question ID : 292995298
Option 1 ID : 2929951192
Option 2 ID : 2929951191
Option 3 ID : 2929951189
Option 4 ID : 2929951190
Status : Answered
Chosen Option : 2

Q.1 Acceleration due to gravity at height 'h' above the surface of the earth is (R =Radius of the earth)

2
Ans

- 1. $\frac{gR^2}{(R-h)^2}$
- 2. $g\left(1 - \frac{h}{R}\right)$
- 3. $\frac{gR^2}{(R+h)^2}$

4. $\frac{gR}{(R+h)^2}$

Question Type : MCQ
Question ID : 292995288
Option 1 ID : 2929951152
Option 2 ID : 2929951149
Option 3 ID : 2929951150
Option 4 ID : 2929951151
Status : Answered
Chosen Option : 4

Q.1 When an a.c. source is connected across a pure inductor of self inductance (L) then e.m.f.
3 induced in it

Ans

leads the current by phase

1. $\left(\frac{\pi}{2}\right)^c$

lags behind the current by

2. phase $\left(\frac{\pi}{2}\right)^c$

lags behind the current by

3. phase $\left(\frac{\pi}{4}\right)^c$

leads the current by phase

4. $\left(\pi/4\right)^c$

Question Type : MCQ
Question ID : 292995275
Option 1 ID : 2929951097
Option 2 ID : 2929951098
Option 3 ID : 2929951100
Option 4 ID : 2929951099
Status : Answered
Chosen Option : 1

Q.1 If angular momentum of a rotating body about a fixed axis is increased by 10%, its rotational
4 kinetic energy will be increased by

Ans

1. 5%

2. 20%

3. 21%

4. 10%

Question Type : MCQ

Question ID : 292995290
Option 1 ID : 2929951157
Option 2 ID : 2929951159
Option 3 ID : 2929951160
Option 4 ID : 2929951158
Status : Answered
Chosen Option : 2

Q.1 A point source is placed in air. The spherical wavefront has radius ' r_a ' after time ' t '. If
5 the same point source is placed in the medium of refractive index ' μ ', the radius of spherical wavefront in the medium in same time t is

- Ans
- ✓ 1. $\frac{r_a}{\mu}$
 - ✗ 2. $\frac{r_a}{\mu^2}$
 - ✗ 3. $\mu \cdot r_a$
 - ✗ 4. $\mu^2 r_a$

Question Type : MCQ
Question ID : 292995281
Option 1 ID : 2929951123
Option 2 ID : 2929951124
Option 3 ID : 2929951121
Option 4 ID : 2929951122
Status : Answered
Chosen Option : 1

Q.1 In a cyclotron the time required by positive ion to traverse semicircle does NOT depend upon
6

- Ans
- ✗ 1. mass of the particle.
 - ✓ 2. velocity of the particle.
 - ✗ 3. strength of magnetic field.
 - ✗ 4. charge of the particle.

Question Type : MCQ
Question ID : 292995261
Option 1 ID : 2929951043
Option 2 ID : 2929951042
Option 3 ID : 2929951044
Option 4 ID : 2929951041
Status : Answered
Chosen Option : 2

Q.1 From the position of smaller angular displacement ' θ ', the bob of simple pendulum of length ' L '
7 is released then its linear displacement at time ' t ' is

- Ans
- ✗ 1. $x = L \theta \cos 2\pi \sqrt{\frac{g}{L}} t$

✓ 2. $x = L \theta \cos \sqrt{\frac{g}{L}} t$

✗ 3. $x = \theta \sin 2\pi \sqrt{\frac{L}{g}} t$

✗ 4. $x = L \theta \sin \sqrt{\frac{g}{L}} t$

Question Type : MCQ

Question ID : 292995256

Option 1 ID : 2929951023

Option 2 ID : 2929951022

Option 3 ID : 2929951021

Option 4 ID : 2929951024

Status : Answered

Chosen Option : 3

Q.1 The magnitude of the induced e.m.f. produced in the coil when a magnet is inserted into it does
8 'NOT' depend upon the

Ans ✗ 1. speed of approach of the magnet.

✗ 2. magnetic moment of the magnet.

✗ 3. number of turns of the coil.

✓ 4. resistance of the coil.

Question Type : MCQ

Question ID : 292995252

Option 1 ID : 2929951008

Option 2 ID : 2929951007

Option 3 ID : 2929951005

Option 4 ID : 2929951006

Status : Answered

Chosen Option : 1

Q.1 The mass and radius of earth is M_e and R_e respectively and that of moon is M_m and
9 R_m respectively. The distance between the centre of earth and that of moon is ' D '.
The minimum speed required for a body (mass ' m ') to project from a point midway
between their centres to escape to infinity is

Ans

✗ 1. $\left(\frac{GD}{M_e}\right)^{1/2}$

✗ 2. $\sqrt{\frac{(M_e + M_m)}{D}}$

✓ 3. $2\sqrt{G(M_e + M_m)/D}$

4. $\frac{G(M_e + M_m)}{2D}$

Question Type : MCQ
Question ID : 292995253
Option 1 ID : 2929951012
Option 2 ID : 2929951010
Option 3 ID : 2929951009
Option 4 ID : 2929951011
Status : Answered
Chosen Option : 4

Q.2 The rate of cooling of a body is $2^{\circ}\text{C}/\text{min}$ when the body is at 50°C above the temperature of surroundings. When the body is at 30°C above the temperature of surroundings, its rate of cooling will be

- Ans 1. $0.6^{\circ}\text{C}/\text{min}$
 2. $0.9^{\circ}\text{C}/\text{min}$
 3. $1.2^{\circ}\text{C}/\text{min}$
 4. $1.5^{\circ}\text{C}/\text{min}$

Question Type : MCQ
Question ID : 292995262
Option 1 ID : 2929951048
Option 2 ID : 2929951047
Option 3 ID : 2929951046
Option 4 ID : 2929951045
Status : Answered
Chosen Option : 3

Q.2 A charge 'q' is enclosed by a Gaussian spherical surface of radius 'R'. If, now, radius of the spherical surface is doubled the outward electric flux will

- Ans 1. doubled
 2. remain same
 3. increase four times
 4. reduce to half

Question Type : MCQ
Question ID : 292995283
Option 1 ID : 2929951131
Option 2 ID : 2929951132
Option 3 ID : 2929951130
Option 4 ID : 2929951129
Status : Answered
Chosen Option : 3

Q.2 When an npn transistor is used as an amplifier

- 2
Ans 1. electrons move from base to collector.
 2. holes move from emitter to base.
 3. electrons move from collector to base.
 4. holes move from base to collector.

Question Type : MCQ
Question ID : 292995254
Option 1 ID : 2929951013
Option 2 ID : 2929951016
Option 3 ID : 2929951014
Option 4 ID : 2929951015
Status : Answered
Chosen Option : 1

Q.2 A capillary tube is dipped in water, the water rises in it to a height 'h'. If 'r' is the
3 radius of bore of tube then

Ans

1. $h \propto r^2$

2. $h \propto 1/r$

3. $h \propto r$

4. $h \propto 1/r^2$

Question Type : MCQ
Question ID : 292995294
Option 1 ID : 2929951175
Option 2 ID : 2929951174
Option 3 ID : 2929951173
Option 4 ID : 2929951176
Status : Answered
Chosen Option : 3

Q.2 A particle performs simple harmonic motion from mean position, with period 8 s. The distance
4 travelled by it between 1st and 2nd second of its motion is (A = amplitude of S. H. M.)

Ans

1. $A \frac{1}{2}$

2. $A \left(\frac{1}{\sqrt{2}} - 1 \right)$

3. $A \left(1 - \frac{1}{\sqrt{2}} \right)$

4. $A \left(\frac{1}{\sqrt{2}} \right)$

Question Type : MCQ
Question ID : 292995292
Option 1 ID : 2929951168
Option 2 ID : 2929951165
Option 3 ID : 2929951167
Option 4 ID : 2929951166
Status : Answered
Chosen Option : 3

Q.2 Which of the following statements is NOT true for a particle moving in circle with a constant
5 angular speed?

- Ans
- 1. The radial acceleration vector is tangent to the circle.
 - 2. The linear velocity vector is tangent to the circle.
 - 3. The radial acceleration vector points towards the centre of the circle.
 - 4. The linear velocity and radial acceleration vectors at a point are perpendicular to each other.

Question Type : MCQ
Question ID : 292995277
Option 1 ID : 2929951106
Option 2 ID : 2929951105
Option 3 ID : 2929951107
Option 4 ID : 2929951108
Status : Answered
Chosen Option : 2

Q.2 A sonometer wire of length ' L_1 ' is in unison with a tuning fork of frequency ' n '. When
6 the vibrating length of the wire is reduced to ' L_2 ', it produces ' x ' beats per second with the fork. The frequency of the fork is

- Ans
- 1. $\frac{L_1 x}{L_2 - L_1}$
 - 2. $\frac{L_1 x}{L_1 - L_2}$
 - 3. $\frac{L_2 x}{L_2 - L_1}$
 - 4. $\frac{L_2 x}{L_1 - L_2}$

Question Type : MCQ
Question ID : 292995264
Option 1 ID : 2929951056
Option 2 ID : 2929951054
Option 3 ID : 2929951055
Option 4 ID : 2929951053
Status : Answered
Chosen Option : 3

Q.2 The innermost orbit of the hydrogen atom has a diameter of 1.06 \AA , the diameter of the tenth
7 orbit is

- Ans
- 1. 53 \AA
 - 2. 5.3 \AA
 - 3. 106 \AA
 - 4. 10.6 \AA

Question Type : MCQ
Question ID : 292995286

Option 1 ID : 2929951143
Option 2 ID : 2929951142
Option 3 ID : 2929951141
Option 4 ID : 2929951144
Status : Answered
Chosen Option : 4

Q.2 Two vibrating tuning forks produce waves which are represented by $Y_1=4 \sin 500\pi t$ and $Y_2=4 \sin 506\pi t$. The number of beats produced per minute by these two waves is

- Ans
- 1. 60
 - 2. 180
 - 3. 360
 - 4. 3

Question Type : MCQ
Question ID : 292995271
Option 1 ID : 2929951083
Option 2 ID : 2929951082
Option 3 ID : 2929951081
Option 4 ID : 2929951084
Status : Answered
Chosen Option : 2

Q.2 Dimensions of magnetic intensity are

- 9
- Ans
- 1. $[L^{-1}M^0T^0I^1]$
 - 2. $[L^{-1}M^0T^0I^{-1}]$
 - 3. $[L^1M^0T^0I^{-1}]$
 - 4. $[L^{-1}M^1T^1I^{-1}]$

Question Type : MCQ
Question ID : 292995272
Option 1 ID : 2929951085
Option 2 ID : 2929951087
Option 3 ID : 2929951086
Option 4 ID : 2929951088
Status : Answered
Chosen Option : 1

Q.3 The S.I. unit of impulse is the same as that of

- 0
- Ans
- 1. linear velocity.
 - 2. angular velocity.
 - 3. linear momentum.
 - 4. angular momentum.

Question Type : MCQ
Question ID : 292995257
Option 1 ID : 2929951028

Option 2 ID : 2929951027
Option 3 ID : 2929951026
Option 4 ID : 2929951025
Status : Answered
Chosen Option : 4

Q.3 Half-lives of two radioactive elements A and B are 20 minute and 40 minute respectively.
1 Initially the samples have equal nuclei. After 80 minute, the ratio of decayed number of A and B nuclei will be

- Ans 1. 1:4
 2. 5:4
 3. 1:16
 4. 4:1

Question Type : MCQ
Question ID : 292995265
Option 1 ID : 2929951058
Option 2 ID : 2929951059
Option 3 ID : 2929951057
Option 4 ID : 2929951060
Status : Answered
Chosen Option : 1

Q.3 In Biprism experiment the distance between the two virtual images of the slits in the magnified
2 and diminished position are 2.4 mm and 0.6 mm respectively. The distance between two coherent sources is

- Ans 1. 1 mm
 2. 3.0 mm
 3. 1.2 mm
 4. 2.4 mm

Question Type : MCQ
Question ID : 292995255
Option 1 ID : 2929951017
Option 2 ID : 2929951020
Option 3 ID : 2929951018
Option 4 ID : 2929951019
Status : Answered
Chosen Option : 2

Q.3 A conical pendulum has bob of mass of 250g and a length of 1m. If the horizontal circle traced
3 by the bob has a diameter of 120cm, then the tension in the string would be nearly ($g=9.8\text{m/s}^2$)

- Ans 1. 3.160N
 2. 2.980N
 3. 2.920N
 4. 3.062N

Question Type : MCQ
Question ID : 292995258
Option 1 ID : 2929951029
Option 2 ID : 2929951031
Option 3 ID : 2929951032
Option 4 ID : 2929951030
Status : Answered

Chosen Option : 3

Q.3 'M' kg weight is suspended from a weightless spring and it has period 'T'. If now '4m'
4 kg weight is suspended from the same spring, the new period will be

Ans

1. $\frac{T}{2}$

2. $2T$

3. $4T$

4. T

Question Type : MCQ

Question ID : 292995280

Option 1 ID : 2929951117

Option 2 ID : 2929951119

Option 3 ID : 2929951120

Option 4 ID : 2929951118

Status : Answered

Chosen Option : 3

Q.3 Bending of beam can be reduced by using
5

Ans

1. a material with large value of Young's modulus.

2. small value of the depth of the bar

3. large value of the length of the beam.

4. small value of the breadth of the bar

Question Type : MCQ

Question ID : 292995284

Option 1 ID : 2929951133

Option 2 ID : 2929951136

Option 3 ID : 2929951134

Option 4 ID : 2929951135

Status : Answered

Chosen Option : 4

Q.3 In the formula for high resolving power microscope, the numerical aperture of the object of the
6 microscope is given as
(μ = refractive index of oil and angle made by the object at the aperture = 2α)

Ans

1. $2\mu\sin^2\alpha$

2. $2\mu^2\sin^2\alpha$

3. $2\mu^2\sin\alpha$

4. $\mu\sin\alpha$

Question Type : MCQ

Question ID : 292995300

Option 1 ID : 2929951200

Option 2 ID : 2929951198

Option 3 ID : 2929951197
Option 4 ID : 2929951199
Status : Answered
Chosen Option : 1

Q.3
7 A charged capacitor has charge ' Q_1 ' at potential ' V_1 '. The charge on capacitor is increased to ' Q_2 ' so that its potential increases to ' V_2 ', then the difference between final and initial energy stored in capacitor is

Ans

1. $\frac{1}{2}(Q_2 - Q_1)(V_2 - V_1)$

2. $\frac{1}{2}(Q_2V_2 - Q_1V_1)$

3. $\frac{1}{2}\left(\frac{Q_2^2}{V_2} - \frac{Q_1^2}{V_1}\right)$

4. $\frac{1}{2}(Q_2V_2^2 - Q_1V_1^2)$

Question Type : MCQ
Question ID : 292995278
Option 1 ID : 2929951109
Option 2 ID : 2929951110
Option 3 ID : 2929951112
Option 4 ID : 2929951111
Status : Answered
Chosen Option : 3

Q.3
8 The component of the vector $\vec{P} = \hat{i}P_x + \hat{j}P_y + \hat{k}P_z$ along the direction of $(\hat{i} - \hat{j})$ is

Ans

1. $P_x + P_y - P_z$

2. $P_x - P_y$

3. $\frac{P_x - P_y}{\sqrt{2}}$

4. $\frac{P_x + P_y}{\sqrt{2}}$

Question Type : MCQ
Question ID : 292995267
Option 1 ID : 2929951067
Option 2 ID : 2929951068
Option 3 ID : 2929951065
Option 4 ID : 2929951066
Status : Answered

Chosen Option : 1

Q.3 Two long, straight wires are set parallel to each other. Both the wires carry a current 'I' in opposite directions and separation between them is '2R'. The magnetic induction at the midway between them is (μ_0 = permeability of free space)

Ans 1. zero

2. $\frac{\mu_0 I}{4\pi r}$

3. $\frac{\mu_0 I}{\pi r}$

4. $\frac{\mu_0 I}{2\pi r}$

Question Type : MCQ

Question ID : 292995276

Option 1 ID : 2929951101

Option 2 ID : 2929951102

Option 3 ID : 2929951104

Option 4 ID : 2929951103

Status : Answered

Chosen Option : 3

Q.4 A metal surface ejects electrons when irradiated by blue light, but not when irradiated by green light. The electrons will also be ejected by the surface, when irradiated by

Ans 1. red light

2. violet light

3. orange light

4. yellow light

Question Type : MCQ

Question ID : 292995289

Option 1 ID : 2929951155

Option 2 ID : 2929951153

Option 3 ID : 2929951154

Option 4 ID : 2929951156

Status : Answered

Chosen Option : 2

Q.4 The ratio of magnetic induction along the axis to magnetic induction along the equator of a bar magnet for a point at the same distance (r) from the centre of magnet is

Ans 1. 1:2

2. 2:1

3. $\sqrt{2}:1$

4. 4:1

Question Type : MCQ

Question ID : 292995273

Option 1 ID : 2929951090

Option 2 ID : 2929951089
Option 3 ID : 2929951092
Option 4 ID : 2929951091
Status : Answered
Chosen Option : 2

Q.4 The ratio of magnetization and magnetic intensity is called
2

- Ans
- 1. permeability
 - 2. magnetic induction
 - 3. magnetic susceptibility
 - 4. gyromagnetic ratio

Question Type : MCQ
Question ID : 292995291
Option 1 ID : 2929951162
Option 2 ID : 2929951161
Option 3 ID : 2929951163
Option 4 ID : 2929951164
Status : Answered
Chosen Option : 2

Q.4 The sequence of harmonics of a pipe open at one end and closed at the other end is 250Hz and
3 350Hz. The resonating length of the air column in its fundamental mode will be (velocity of
sound in air= 340m/s)

- Ans
- 1. 1.8m
 - 2. 1.6m
 - 3. 1.7m
 - 4. 1.4m

Question Type : MCQ
Question ID : 292995251
Option 1 ID : 2929951004
Option 2 ID : 2929951002
Option 3 ID : 2929951003
Option 4 ID : 2929951001
Status : Answered
Chosen Option : 2

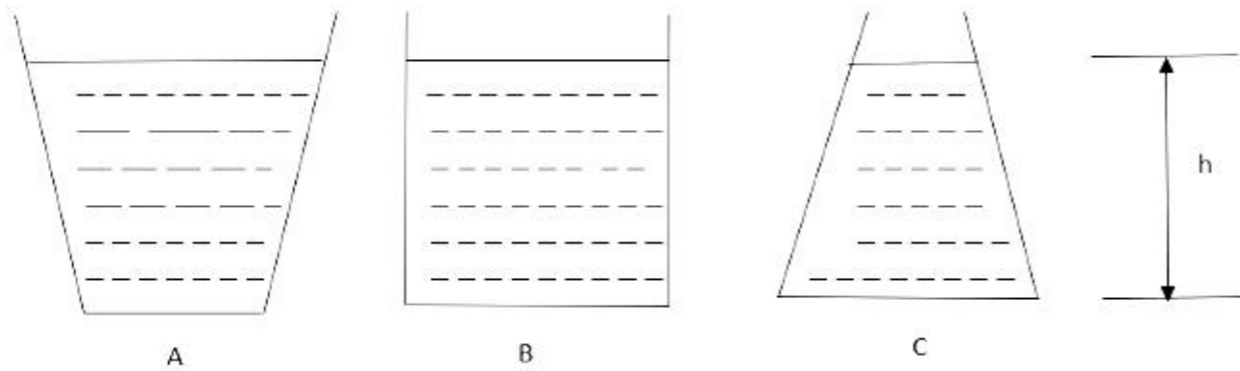
Q.4 In case of Light Emitting Diode (LED) light is emitted due to
4

- Ans
- 1. recombination of holes and electrons.
 - 2. emission of holes and electrons.
 - 3. diffusion of holes.
 - 4. drifting of electrons.

Question Type : MCQ
Question ID : 292995274
Option 1 ID : 2929951095
Option 2 ID : 2929951093
Option 3 ID : 2929951096
Option 4 ID : 2929951094
Status : Answered
Chosen Option : 1

Q.4
5

Three vessels A, B, C of different shapes have same base area and are filled with water up to same height 'h'. The respective forces exerted by water on the bases are ' F_A ', ' F_B ', ' F_C ' and respective weights are ' W_A ', ' W_B ', ' W_C '. Then



- Ans
- 1. $F_A < F_B < F_C$; $W_A < W_B > W_C$
 - 2. $F_A = F_B = F_C$; $W_A > W_B > W_C$
 - 3. $F_A = F_B = F_C$; $W_A < W_B < W_C$
 - 4. $F_A > F_B > F_C$; $W_A > W_B < W_C$

Question Type : MCQ

Question ID : 292995293

Option 1 ID : 2929951172

Option 2 ID : 2929951170

Option 3 ID : 2929951171

Option 4 ID : 2929951169

Status : Answered

Chosen Option : 4

Q.4 A wire suspended vertically is stretched by 1mm, when mass of 4kg is attached to the lower
6 end. Energy gained by the wire is (Take $g=10\text{m/s}^2$)

- Ans
- 1. 0.01 J
 - 2. 0.02 J
 - 3. 0.03 J
 - 4. 0.04 J

Question Type : MCQ

Question ID : 292995296

Option 1 ID : 2929951181

Option 2 ID : 2929951182

Option 3 ID : 2929951183

Option 4 ID : 2929951184

Status : Answered

Chosen Option : 3

Q.4 Work done by the force on the body is the measure of the change in its
7

- Ans
- 1. momentum.
 - 2. mass.
 - 3. potential energy.
 - 4. kinetic energy.

Question Type : MCQ

Question ID : 292995266
Option 1 ID : 2929951064
Option 2 ID : 2929951063
Option 3 ID : 2929951062
Option 4 ID : 2929951061
Status : Answered
Chosen Option : 3

Q.4 The dimensions of angular momentum are
8

Ans

✓ 1. $[L^2 M^1 T^{-1}]$

✗ 2. $[L^2 M^2 T^{-2}]$

✗ 3. $[L^2 M^1 T^1]$

✗ 4. $[L^2 M^1 T^{-2}]$

Question Type : MCQ
Question ID : 292995263
Option 1 ID : 2929951050
Option 2 ID : 2929951052
Option 3 ID : 2929951051
Option 4 ID : 2929951049
Status : Answered
Chosen Option : 1

Q.4 When a resistance ' R_1 ' is connected across the terminal of a cell of e.m.f. ' E_1 ' the
9 current is ' I_1 '. When the resistance is changed to ' R_2 ' the current is ' I_2 '. The internal resistance of the cell is

Ans

✗ 1. $\frac{I_1 R_2 + I_2 R_1}{I_1 + I_2}$

✗ 2. $\frac{I_2 R_2 + I_1 R_1}{I_1 + I_2}$

✓ 3. $\frac{I_2 R_2 - I_1 R_1}{I_1 - I_2}$

✗ 4. $\frac{I_1 R_2 - I_2 R_1}{I_1 - I_2}$

Question Type : MCQ
Question ID : 292995285
Option 1 ID : 2929951139
Option 2 ID : 2929951140
Option 3 ID : 2929951138
Option 4 ID : 2929951137
Status : Answered
Chosen Option : 3

Q.5 In potentiometer experiment, the potential gradient can be increased by

0

- Ans
- 1. increasing the cross-sectional area of the potentiometer wire.
 - 2. using a wire of material of low specific resistance.
 - 3. decreasing the cross-sectional area of the potentiometer wire.
 - 4. decreasing the current through it.

Question Type : MCQ

Question ID : 292995268

Option 1 ID : 2929951069

Option 2 ID : 2929951072

Option 3 ID : 2929951070

Option 4 ID : 2929951071

Status : Answered

Chosen Option : 1

Section: Chemistry

Q.1 Among the following, an artificial sweetening agent which does not contain - CO - NH - bonding in molecule is

- Ans
- 1. Suculose
 - 2. Alitame
 - 3. Aspartame
 - 4. Saccharine

Question Type : MCQ

Question ID : 292995345

Option 1 ID : 2929951379

Option 2 ID : 2929951380

Option 3 ID : 2929951378

Option 4 ID : 2929951377

Status : Answered

Chosen Option : 3

Q.2 Identify the oxidising agent in the following redox reaction



- Ans
- 1. Cl^-
 - 2. Br^-
 - 3. Br_2
 - 4. Cl_2

Question Type : MCQ

Question ID : 292995341

Option 1 ID : 2929951363

Option 2 ID : 2929951362

Option 3 ID : 2929951364

Option 4 ID : 2929951361

Status : Answered

Chosen Option : 3

Q.3 Identify diamagnetic ion from following. (At.no.of Na=11, Cu=29, Fe=26, Cr=24)

- Ans
- 1. Cu^{++}
 - 2. Fe^{3+}
 - 3. Na^+
 - 4. Cr^{3+}

Question Type : MCQ
Question ID : 292995323
Option 1 ID : 2929951290
Option 2 ID : 2929951291
Option 3 ID : 2929951289
Option 4 ID : 2929951292
Status : Answered
Chosen Option : 2

Q.4 A polymer obtained from the monomers ethylene glycol and dimethyl terephthalate is

- Ans
- 1. Nylon-6
 - 2. Terylene
 - 3. Bakelite
 - 4. Nylon-6,10

Question Type : MCQ
Question ID : 292995313
Option 1 ID : 2929951249
Option 2 ID : 2929951252
Option 3 ID : 2929951251
Option 4 ID : 2929951250
Status : Answered
Chosen Option : 1

Q.5 Which one of the following is a neutral oxide?

- Ans
- 1. Al_2O_3
 - 2. N_2O
 - 3. Na_2O
 - 4. SO_2

Question Type : MCQ
Question ID : 292995346
Option 1 ID : 2929951383
Option 2 ID : 2929951384
Option 3 ID : 2929951381
Option 4 ID : 2929951382
Status : Answered
Chosen Option : 1

Q.6 Which among following gases is readily adsorbed by activated charcoal ?

Ans

1. H₂

2. SO₂

3. N₂

4. O₂

Question Type : MCQ

Question ID : 292995336

Option 1 ID : 2929951343

Option 2 ID : 2929951342

Option 3 ID : 2929951341

Option 4 ID : 2929951344

Status : Answered

Chosen Option : 3

Q.7 How are [Co(NH₃)₅SO₄]NO₂ and [Co(NH₃)₅NO₂]SO₄ related to each other?

Ans 1. Linkage isomers

2. Ionization isomers

3. Geometrical isomers

4. Coordination isomers

Question Type : MCQ

Question ID : 292995310

Option 1 ID : 2929951237

Option 2 ID : 2929951238

Option 3 ID : 2929951240

Option 4 ID : 2929951239

Status : Answered

Chosen Option : 3

Q.8 Which of the following rate expression is true for alkaline hydrolysis of methyl bromide ?

Ans 1. Rate \propto [OH⁻][CH₃Br]

2. Rate \propto [OH⁻]

3. Rate \propto [CH₃Br]

4. Rate \propto [CH₃Br] + [OH⁻]

Question Type : MCQ

Question ID : 292995322

Option 1 ID : 2929951286

Option 2 ID : 2929951288

Option 3 ID : 2929951287

Option 4 ID : 2929951285

Status : Answered

Chosen Option : 3

Q.9 Which among following element has highest chemical reactivity?

Ans 1. Be

- 2. Mg
- 3. Sr
- 4. Ba

Question Type : MCQ
Question ID : 292995335
Option 1 ID : 2929951338
Option 2 ID : 2929951340
Option 3 ID : 2929951339
Option 4 ID : 2929951337
Status : Answered
Chosen Option : 2

Q.1 Neo-pentyl alcohol is a -
0

- Ans
- 1. Tertiary alcohol
 - 2. Secondary alcohol
 - 3. Primary alcohol
 - 4. Dihydric alcohol

Question Type : MCQ
Question ID : 292995326
Option 1 ID : 2929951302
Option 2 ID : 2929951303
Option 3 ID : 2929951301
Option 4 ID : 2929951304
Status : Answered
Chosen Option : 1

Q.1 Which of following is a mineral of aluminium?
1

- Ans
- 1. Dolomite
 - 2. Siderite
 - 3. China clay
 - 4. Calamine

Question Type : MCQ
Question ID : 292995304
Option 1 ID : 2929951215
Option 2 ID : 2929951216
Option 3 ID : 2929951213
Option 4 ID : 2929951214
Status : Answered
Chosen Option : 1

Q.1 Two moles of an ideal gas are expanded from volume of 15.5 litre to 20 litre against a constant
2 external pressure of 1 atmosphere. The amount of work done is

- Ans
- 1. -4.5 J
 - 2. 2×10^{-2} J
 - 3. -455.8 J
 - 4. 225 J

Question Type : MCQ
Question ID : 292995311
Option 1 ID : 2929951242
Option 2 ID : 2929951244
Option 3 ID : 2929951241
Option 4 ID : 2929951243
Status : Answered
Chosen Option : 1

Q.1 What is SI unit of Luminous intensity?

3

- Ans
- 1. Ampere
 - 2. $^{\circ}\text{C}$
 - 3. Kelvin
 - 4. Candela

Question Type : MCQ
Question ID : 292995349
Option 1 ID : 2929951393
Option 2 ID : 2929951395
Option 3 ID : 2929951394
Option 4 ID : 2929951396
Status : Answered
Chosen Option : 4

Q.1 The magnitude of ΔT_f depends on

4

- Ans
- 1. Nature of solute only
 - 2. Nature of the solute and the concentration of solution
 - 3. Nature of the solvent and the concentration of solution
 - 4. Nature of solvent only

Question Type : MCQ
Question ID : 292995329
Option 1 ID : 2929951314
Option 2 ID : 2929951316
Option 3 ID : 2929951315
Option 4 ID : 2929951313
Status : Answered
Chosen Option : 3

Q.1 The decreasing order of thermal stability of hydrides of group 15 elements is

5

- Ans
- 1. $\text{AsH}_3 > \text{SbH}_3 > \text{NH}_3 > \text{PH}_3$
 - 2. $\text{NH}_3 > \text{PH}_3 > \text{AsH}_3 > \text{SbH}_3$
 - 3. $\text{SbH}_3 > \text{AsH}_3 > \text{PH}_3 > \text{NH}_3$
 - 4. $\text{PH}_3 > \text{AsH}_3 > \text{SbH}_3 > \text{NH}_3$

Question Type : MCQ

Question ID : 292995332

Option 1 ID : 2929951327

Option 2 ID : 2929951325

Option 3 ID : 2929951328

Option 4 ID : 2929951326

Status : Answered

Chosen Option : 3

Q.1
6 For the elementary reaction $N_{2(g)} + 3H_{2(g)} \rightarrow 2NH_{3(g)}$ identify the correct relation among the following relations

Ans 1.

$$\frac{d[NH_{3(g)}]}{dt} = \frac{-1}{3} \frac{d[H_{2(g)}]}{dt}$$

2.

$$\frac{-d[N_{2(g)}]}{dt} = \frac{-d[H_{2(g)}]}{dt}$$

3. $\frac{+d[NH_{3(g)}]}{dt} = \frac{-3}{2} \frac{[dH_{2(g)}]}{dt}$

4. $\frac{-d[H_{2(g)}]}{dt} = \frac{+3}{2} \frac{d[NH_{3(g)}]}{dt}$

Question Type : MCQ

Question ID : 292995317

Option 1 ID : 2929951268

Option 2 ID : 2929951265

Option 3 ID : 2929951267

Option 4 ID : 2929951266

Status : Answered

Chosen Option : 2

Q.1
7 When aniline forms 2,4,6- tribromo aniline on reaction with bromine water , it undergoes

Ans 1. nucleophilic addition

2. nucleophilic substitution

3. electrophilic substitution

4. electrophilic addition

Question Type : MCQ

Question ID : 292995333
Option 1 ID : 2929951330
Option 2 ID : 2929951332
Option 3 ID : 2929951331
Option 4 ID : 2929951329
Status : Answered
Chosen Option : 4

Q.1 Which is most stable oxidation state of Vanadium (At.no.23)?

8

- Ans
- 1. +2
 - 2. +3
 - 3. +4
 - 4. +5

Question Type : MCQ
Question ID : 292995306
Option 1 ID : 2929951221
Option 2 ID : 2929951222
Option 3 ID : 2929951223
Option 4 ID : 2929951224
Status : Answered
Chosen Option : 2

Q.1 What is the charge on 0.05 mol of electrons?

9

- Ans
- 1. 2412.5 C
 - 2. 965 C
 - 3. 4825 C
 - 4. 9650 C

Question Type : MCQ
Question ID : 292995303
Option 1 ID : 2929951211
Option 2 ID : 2929951212
Option 3 ID : 2929951210
Option 4 ID : 2929951209
Status : Answered
Chosen Option : 2

Q.2 The standard electrode potential of calomel electrode is increased by

0

- Ans
- 1. decreasing the concentration of KCl solution
 - 2. Increasing the quantity of Hg_2Cl_2
 - 3. decreasing the quantity of calomel
 - 4. Increasing the concentration of KCl solution

Question Type : MCQ
Question ID : 292995325
Option 1 ID : 2929951299
Option 2 ID : 2929951298
Option 3 ID : 2929951300

Option 4 ID : 2929951297
Status : Answered
Chosen Option : 2

Q.2 Which of the following allotropic forms of sulphur exists in chair form?

1

- Ans 1. Cyclo - sulphur
 2. α - Sulphur
 3. β - Sulphur
 4. plastic sulphur

Question Type : MCQ
Question ID : 292995350
Option 1 ID : 2929951399
Option 2 ID : 2929951397
Option 3 ID : 2929951398
Option 4 ID : 2929951400
Status : Answered
Chosen Option : 1

Q.2 Identify the amphoteric oxide from the following

2

- Ans 1. B_2O_3
 2. CO
 3. ZnO
 4. CaO

Question Type : MCQ
Question ID : 292995348
Option 1 ID : 2929951390
Option 2 ID : 2929951389
Option 3 ID : 2929951391
Option 4 ID : 2929951392
Status : Answered
Chosen Option : 1

Q.2
3 What type of hybridisation is present in PCl_5 molecule?

- Ans 1. sp^3d^2
 2. sp^3d^3
 3. sp^3d
 4. dsp^2

Question Type : MCQ
Question ID : 292995331
Option 1 ID : 2929951323
Option 2 ID : 2929951324
Option 3 ID : 2929951322
Option 4 ID : 2929951321

Status : Answered
Chosen Option : 1

Q.2 Any galvanic cell working under standard condition, if the equation of the cell reaction is multiplied by 3 then

Ans

- 1. E^0 increases three times
- 2. E^0 is unchanged
- 3. E^0 decreases three times
- 4. ΔG^0 is unchanged

Question Type : MCQ
Question ID : 292995334
Option 1 ID : 2929951334
Option 2 ID : 2929951336
Option 3 ID : 2929951335
Option 4 ID : 2929951333
Status : Answered
Chosen Option : 1

Q.2 Which among the following elements exhibits only +3 oxidation state?

5

Ans

- 1. $Nd_{(Z=60)}$
- 2. $La_{(Z=57)}$
- 3. $Dy_{(Z=66)}$
- 4. $Yb_{(Z=70)}$

Question Type : MCQ
Question ID : 292995302
Option 1 ID : 2929951208
Option 2 ID : 2929951205
Option 3 ID : 2929951206
Option 4 ID : 2929951207
Status : Answered
Chosen Option : 2

Q.2 The sodium fusion extract of aniline is boiled with ferrous sulphate and then acidified with concentrated sulphuric acid. The colour of complex formed is

6

Ans

- 1. Violet
- 2. Yellow
- 3. Black
- 4. Prussian blue

Question Type : MCQ
Question ID : 292995343
Option 1 ID : 2929951372
Option 2 ID : 2929951370

Option 3 ID : 2929951371
Option 4 ID : 2929951369
Status : Answered
Chosen Option : 2

Q.2 Nitronic acid with 50% sulphuric acid at room temperature forms an aldehyde. This
7 reaction is known as,

- Ans
- 1. Gabriel phthalamide synthesis
 - 2. Nef carbonyl synthesis
 - 3. Etard reaction
 - 4. Hoffmann degradation

Question Type : MCQ
Question ID : 292995337
Option 1 ID : 2929951346
Option 2 ID : 2929951345
Option 3 ID : 2929951348
Option 4 ID : 2929951347
Status : Answered
Chosen Option : 4

Q.2 Which among following reactions of water generates oxygen gas ?
8

- Ans
- 1. Reaction with calcium oxide
 - 2. Reaction with sodium
 - 3. Reaction with ammonia
 - 4. Photosynthesis reaction

Question Type : MCQ
Question ID : 292995328
Option 1 ID : 2929951311
Option 2 ID : 2929951310
Option 3 ID : 2929951312
Option 4 ID : 2929951309
Status : Answered
Chosen Option : 1

Q.2
9 PCl_5 exists, but NCl_5 does not, due to-

- Ans
- 1. NCl_5 is unstable
 - 2. larger size of nitrogen
 - 3. inertness of nitrogen
 - 4. non availability of vacant d- atomic orbitals

Question Type : MCQ
Question ID : 292995308
Option 1 ID : 2929951230
Option 2 ID : 2929951231
Option 3 ID : 2929951229
Option 4 ID : 2929951232
Status : Answered

Chosen Option : 1

Q.3 The temperature and pressure of 4 dm^3 of an ideal gas are doubled. The volume of the gas now is

Ans

1. 2 dm^3

2. 4 dm^3

3. 8 dm^3

4. 3 dm^3

Question Type : MCQ

Question ID : 292995340

Option 1 ID : 2929951360

Option 2 ID : 2929951358

Option 3 ID : 2929951357

Option 4 ID : 2929951359

Status : Answered

Chosen Option : 2

Q.3 Styrene and 1,3-butadiene on polymerisation forms

1

Ans

1. Buna-N

2. Neoprene

3. Butyl rubber

4. Buna-S

Question Type : MCQ

Question ID : 292995342

Option 1 ID : 2929951368

Option 2 ID : 2929951365

Option 3 ID : 2929951366

Option 4 ID : 2929951367

Status : Answered

Chosen Option : 2

Q.3 What happens during the action of catalyst?

2

Ans

1. Temperature increases

2. Temperature decreases

3. E_a increases

4. E_a decreases

Question Type : MCQ

Question ID : 292995305

Option 1 ID : 2929951219

Option 2 ID : 2929951220

Option 3 ID : 2929951217

Option 4 ID : 2929951218

Status : Answered

Chosen Option : 3

Q.3
3 The standard enthalpy of formation of $C_2H_6(g)$ is $-84.7 \text{ kJ mol}^{-1}$.
what is the enthalpy change for the formation of 0.06 kg ethane ?
(Given, atomic mass C=12, H=1)

- Ans
- 1. -42.35 kJ
 - 2. -169.4 kJ
 - 3. -50.82 kJ
 - 4. -236.7 kJ

Question Type : MCQ
Question ID : 292995347
Option 1 ID : 2929951388
Option 2 ID : 2929951386
Option 3 ID : 2929951387
Option 4 ID : 2929951385
Status : Answered
Chosen Option : 1

Q.3 Which among the following complex ion is NOT diamagnetic?
4

- Ans
- 1. $[Ni(CN)_4]^{2-}$
 - 2. $Ni(CO)_4$
 - 3. $[Co(NH_3)_6]^{3+}$
 - 4. $[NiCl_4]^{2-}$

Question Type : MCQ
Question ID : 292995316
Option 1 ID : 2929951262
Option 2 ID : 2929951263
Option 3 ID : 2929951264
Option 4 ID : 2929951261
Status : Answered
Chosen Option : 3

Q.3 Identify optically inactive compound among the following
5

- Ans
- 1. 2 - chloropropanal
 - 2. 2 - chloropentane
 - 3. 2 - chloro,2-methylbutane
 - 4. 2 - chlorobutane

Question Type : MCQ
Question ID : 292995338
Option 1 ID : 2929951350
Option 2 ID : 2929951349
Option 3 ID : 2929951351
Option 4 ID : 2929951352
Status : Answered

Chosen Option : 2

Q.3 Which of the following pairs of solutions will be isotonic at the same temperature?

6

Ans

- 1. 1M NaCl and 1M MgCl₂
- 2. 1.5M KCl and 2.5M Urea
- 3. 1.5M AlCl₃ and 2M Na₂SO₄
- 4. 1M NaCl and 2M MgCl₂

Question Type : MCQ

Question ID : 292995318

Option 1 ID : 2929951269

Option 2 ID : 2929951272

Option 3 ID : 2929951271

Option 4 ID : 2929951270

Status : Answered

Chosen Option : 2

Q.3 What type of glycosidic linkage is present in maltose ?

7

Ans

- 1. 1 → 6 β
- 2. 1 → 4 β
- 3. 1 → 6 α
- 4. 1 → 4 α

Question Type : MCQ

Question ID : 292995339

Option 1 ID : 2929951356

Option 2 ID : 2929951354

Option 3 ID : 2929951355

Option 4 ID : 2929951353

Status : Answered

Chosen Option : 3

Q.3 Calculate the volume of bcc type unit cell having edge length 288 pm and 7.2 g cm⁻³ density?

8

(mass of unit cell= 52g)

Ans

- 1. 7.22 cm³
- 2. 1.38×10⁻¹ cm³
- 3. 2.38×10⁻² cm³
- 4. 3.023×10⁻² cm³

Question Type : MCQ

Question ID : 292995321

Option 1 ID : 2929951281

Option 2 ID : 2929951284

Option 3 ID : 2929951282

Option 4 ID : 2929951283

Status : Answered

Chosen Option : 2

Q.3
9 Acetic acid on treatment with NaOH gives Y and with SOCl_2 gives Z. Y and Z when heated form acetic anhydride. The compounds Y and Z respectively are

- Ans
- 1. CH_3OH and CH_3COCl
 - 2. CH_3COCl and CH_3COONa
 - 3. CH_3COONa and CH_3COCl
 - 4. CH_3COONa and CH_3COOH

Question Type : MCQ

Question ID : 292995330

Option 1 ID : 2929951317

Option 2 ID : 2929951320

Option 3 ID : 2929951318

Option 4 ID : 2929951319

Status : Answered

Chosen Option : 4

Q.4 A solution contains 1.2 moles of solute and 13.8 moles of solvent. Hence the mole fraction of the solute is

- Ans
- 1. 0.085
 - 2. 0.09
 - 3. 0.08
 - 4. 0.075

Question Type : MCQ

Question ID : 292995320

Option 1 ID : 2929951280

Option 2 ID : 2929951278

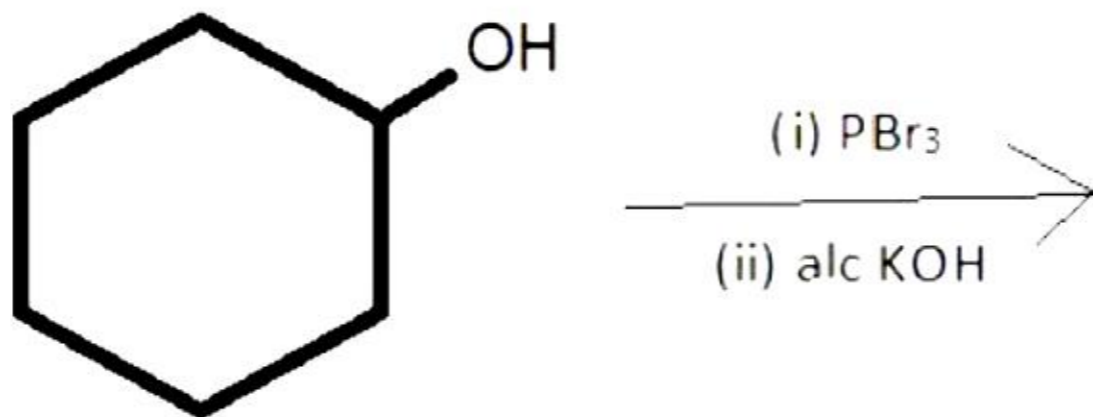
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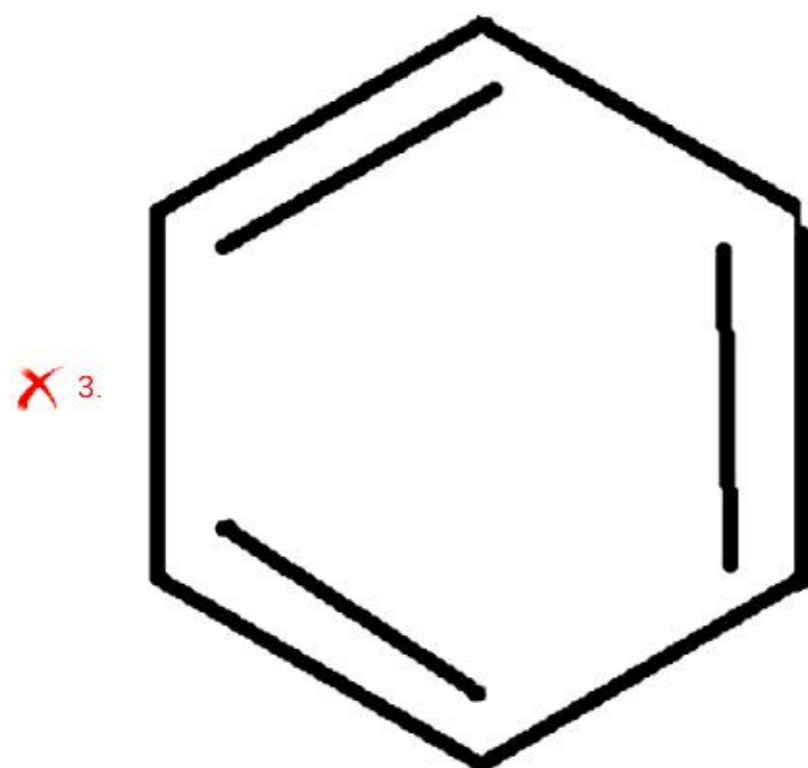
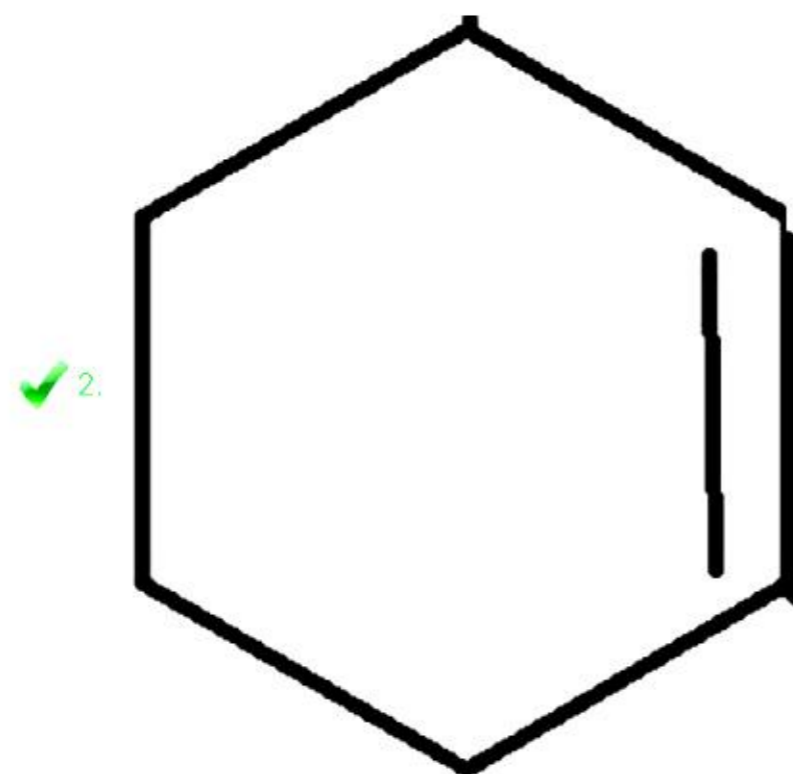
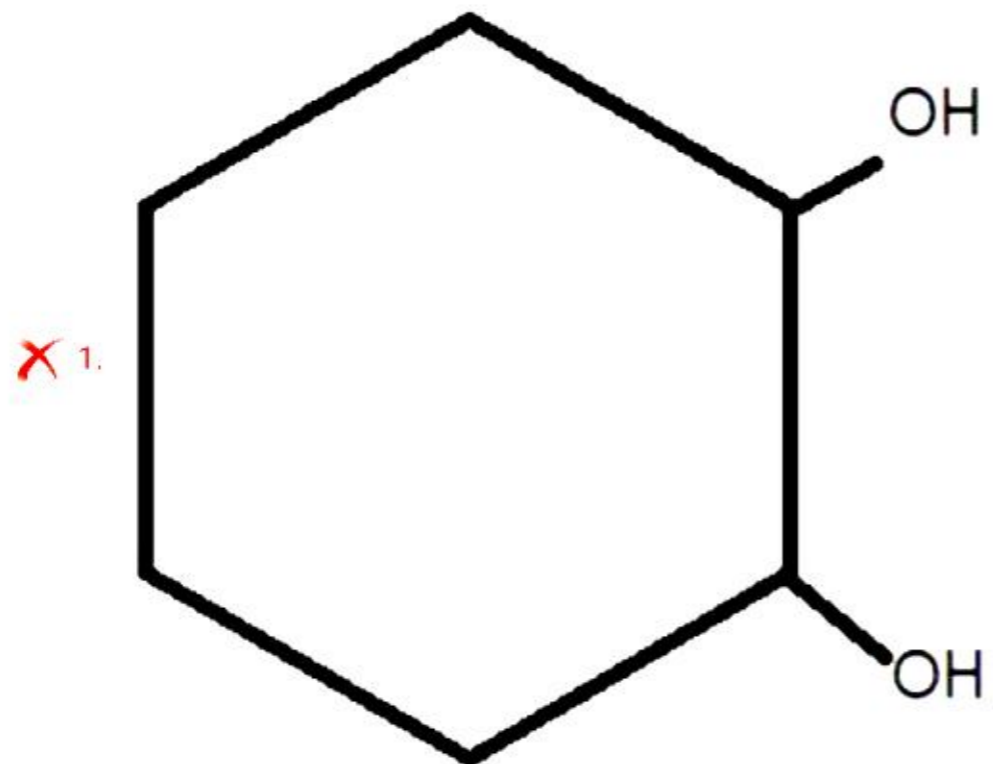
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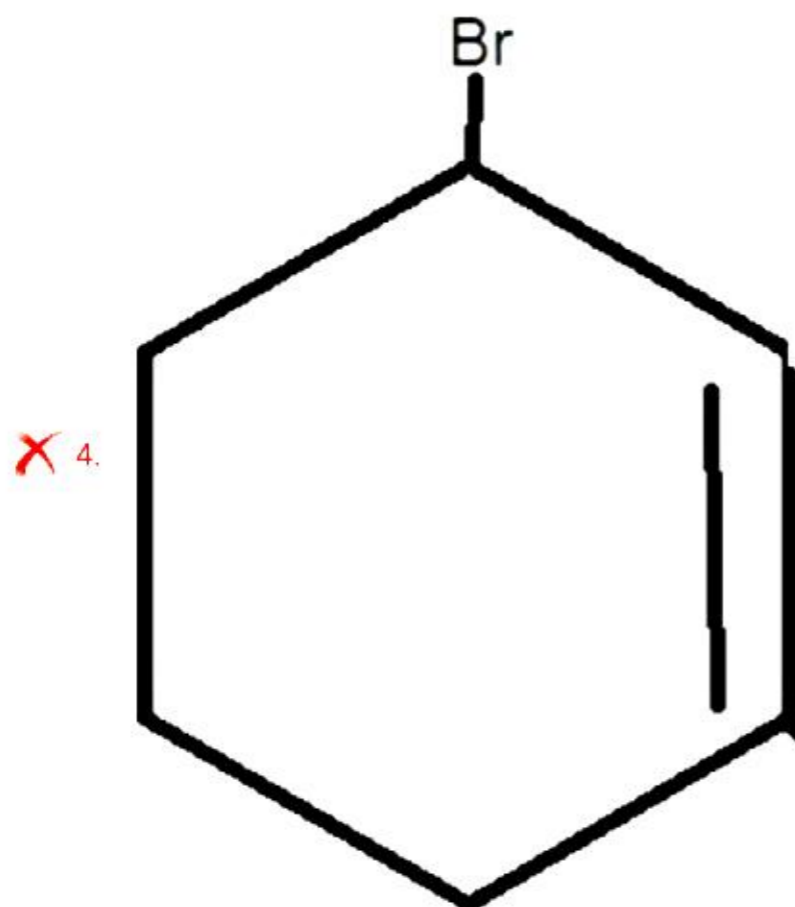
Chosen Option : 3

Q.4
1 Predict the product of the following reaction



Ans





Question Type : MCQ

Question ID : 292995319

Option 1 ID : 2929951273

Option 2 ID : 2929951274

Option 3 ID : 2929951276

Option 4 ID : 2929951275

Status : Answered

Chosen Option : 4

Q.4 Organic compounds 'A' and 'B' react with sodium metal and liberate hydrogen gas. 'A' and 'B' react together to give ethyl methanoate, compound A and B respectively are

Ans

✓ 1. HCOOH and $\text{C}_2\text{H}_5\text{OH}$

✗ 2. CH_3COOH and $\text{C}_2\text{H}_5\text{OH}$

✗ 3. CH_3COOH and HCOOH

✗ 4. CH_3OH and CH_3COOH

Question Type : MCQ

Question ID : 292995312

Option 1 ID : 2929951246

Option 2 ID : 2929951245

Option 3 ID : 2929951247

Option 4 ID : 2929951248

Status : Answered

Chosen Option : 2

Q.4 Haloform test is NOT exhibited by

3

Ans ✗ 1. Ethanal

✓ 2. Propanal

✗ 3. Propanone

4. Acetophenone

Question Type : MCQ
Question ID : 292995327
Option 1 ID : 2929951305
Option 2 ID : 2929951307
Option 3 ID : 2929951306
Option 4 ID : 2929951308
Status : Answered
Chosen Option : 4

Q.4
4 One atom of an element 'x' weighs 6.0×10^{-23} g. Mass of 1 mole of atoms is

- Ans
- 1. 40.0 mol^{-1}
 - 2. 32.31 mol^{-1}
 - 3. 4.5 mol^{-1}
 - 4. 36.13 mol^{-1}

Question Type : MCQ
Question ID : 292995309
Option 1 ID : 2929951235
Option 2 ID : 2929951234
Option 3 ID : 2929951236
Option 4 ID : 2929951233
Status : Answered
Chosen Option : 2

Q.4
5 O- acetyl salicylic acid is used as

- Ans
- 1. Antimicrobial
 - 2. tranquilizer
 - 3. antioxidant
 - 4. antirheumatic drug

Question Type : MCQ
Question ID : 292995314
Option 1 ID : 2929951256
Option 2 ID : 2929951254
Option 3 ID : 2929951255
Option 4 ID : 2929951253
Status : Answered
Chosen Option : 4

Q.4
6 Enthalpy of fusion of water is 6.0 kJ mol^{-1} at 0°C . What is enthalpy change when 4.5×10^{-3} Kg of water undergoes fusion?

- Ans
- 1. $1.5 \times 10^{-2} \text{ kJ}$
 - 2. 1.5 kJ
 - 3. 150 kJ
 - 4. $1.5 \times 10^{-3} \text{ kJ}$

Question Type : MCQ

Question ID : 292995315
Option 1 ID : 2929951258
Option 2 ID : 2929951260
Option 3 ID : 2929951259
Option 4 ID : 2929951257
Status : Answered
Chosen Option : 2

Q.4 Which of the following methods of refining of crude metals uses green logs of wood ?

7

- Ans
- 1. Zone refining
 - 2. Polling
 - 3. Liquation processs
 - 4. Vapour phase refining

Question Type : MCQ
Question ID : 292995301
Option 1 ID : 2929951204
Option 2 ID : 2929951203
Option 3 ID : 2929951201
Option 4 ID : 2929951202
Status : Answered
Chosen Option : 4

Q.4 Which of the following is NOT basic α -amino acid?

8

- Ans
- 1. Histidine
 - 2. Lysine
 - 3. Arginine
 - 4. Alanine

Question Type : MCQ
Question ID : 292995344
Option 1 ID : 2929951376
Option 2 ID : 2929951375
Option 3 ID : 2929951373
Option 4 ID : 2929951374
Status : Answered
Chosen Option : 1

Q.4 The number of sigma and Pi bonds respectively present in a molecule of O-chloro toluene is,

9

- Ans
- 1. 15 and 3
 - 2. 8 and 3
 - 3. 11 and 3
 - 4. 17 and 3

Question Type : MCQ
Question ID : 292995307
Option 1 ID : 2929951227
Option 2 ID : 2929951225
Option 3 ID : 2929951226
Option 4 ID : 2929951228
Status : Answered

Chosen Option : 2

Q.5 How many moles of ethyl bromide are required to produce 'n' moles of butane by Wurtz-Fittig synthesis?

- Ans
- 1. $3n$
 - 2. n
 - 3. $2n$
 - 4. $\frac{n}{2}$

Question Type : MCQ

Question ID : 292995324

Option 1 ID : 2929951296

Option 2 ID : 2929951293

Option 3 ID : 2929951294

Option 4 ID : 2929951295

Status : Answered

Chosen Option : 3

Section: Mathematics

Q.1 If $\int \frac{1}{x(x^7+1)} dx = A \log |x| + B \log |x^7 + 1| + C$ then $A - B = \dots$

- Ans
- 1. $-\frac{2}{7}$
 - 2. $\frac{8}{7}$
 - 3. 0
 - 4. $\frac{2}{7}$

Question Type : MCQ

Question ID : 292995354

Option 1 ID : 2929951415

Option 2 ID : 2929951413

Option 3 ID : 2929951414

Option 4 ID : 2929951416

Status : Answered

Chosen Option : 1

Q.2 The line joining (1,1,1) and (2,2,2) intersects the plane $x + y + z = 9$ at the point

- Ans
- 1. (3,3,3)

2. (3,0,6)

3. (1,4,4)

4. (0,4,5)

Question Type : MCQ

Question ID : 292995382

Option 1 ID : 2929951526

Option 2 ID : 2929951527

Option 3 ID : 2929951525

Option 4 ID : 2929951528

Status : Answered

Chosen Option : 2

Q.3

$$\int_{-2}^2 |x + 1| dx = \dots$$

Ans 1.5

2.7

3.1

4.3

Question Type : MCQ

Question ID : 292995391

Option 1 ID : 2929951563

Option 2 ID : 2929951564

Option 3 ID : 2929951561

Option 4 ID : 2929951562

Status : Answered

Chosen Option : 3

Q.4

$$\tan \left[\cos^{-1} \left(\frac{1}{5\sqrt{2}} \right) - \sin^{-1} \left(\frac{4}{\sqrt{17}} \right) \right] = \dots$$

Ans

1. $\frac{\sqrt{29}}{3}$

2. $\frac{\sqrt{3}}{29}$

3. $\frac{3}{29}$

4. $\frac{29}{3}$

Question Type : MCQ
Question ID : 292995385
Option 1 ID : 2929951539
Option 2 ID : 2929951540
Option 3 ID : 2929951538
Option 4 ID : 2929951537
Status : Answered
Chosen Option : 4

Q.5 The curve passes through the point $(-3, 4)$ and slope of tangent to the curve at any point is $-\frac{x}{y}$. Then the equation of the curve is...

Ans

1. $xy = -12$

2. $x^2 - y^2 = -7$

3. $x^2 + y^2 = 25$

4. $4x + 3y = 0$

Question Type : MCQ
Question ID : 292995378
Option 1 ID : 2929951509
Option 2 ID : 2929951510
Option 3 ID : 2929951511
Option 4 ID : 2929951512
Status : Answered
Chosen Option : 4

Q.6 If A, B are two events such that $P(A) = 0.4$, $P(B) = 0.5$ and $P(A \cap B) = 0.4$ then $P(A \cup B) = \dots$

Ans

1. 0.7

2. 0.4

3. 0.9

4. 0.6

Question Type : MCQ
Question ID : 292995398
Option 1 ID : 2929951589
Option 2 ID : 2929951590
Option 3 ID : 2929951592
Option 4 ID : 2929951591
Status : Answered
Chosen Option : 2

Q.7

If $3x^2 - 4xy + 5y^2 = 0$ then $\frac{d^2y}{dx^2} = \dots$

Ans

1. $\frac{3x - 2y}{2x - 3y}$

2. 0

3. $\frac{y}{x}$

4. $\frac{-x}{y}$

Question Type : MCQ

Question ID : 292995368

Option 1 ID : 2929951472

Option 2 ID : 2929951470

Option 3 ID : 2929951469

Option 4 ID : 2929951471

Status : Answered

Chosen Option : 2

Q.8 The domain of the function $f(x) = \frac{1}{\sqrt{16-x^2}}$ is ...

Ans 1. (0,4)

2. [-4,4]

3. (-4,4)

4. [0,4]

Question Type : MCQ

Question ID : 292995399

Option 1 ID : 2929951596

Option 2 ID : 2929951593

Option 3 ID : 2929951595

Option 4 ID : 2929951594

Status : Answered

Chosen Option : 2

Q.9 The area of region between parabolas $y^2 = 8x$ and $x^2 = 2\sqrt{2}y$ is.....square units

Ans

1. $\frac{32\sqrt{2}}{3}$

2. $\frac{64\sqrt{3}}{2}$

3. $\frac{8\sqrt{2}}{3}$

4. $\frac{16\sqrt{2}}{3}$

Question Type : MCQ
Question ID : 292995353
Option 1 ID : 2929951411
Option 2 ID : 2929951412
Option 3 ID : 2929951409
Option 4 ID : 2929951410
Status : Answered
Chosen Option : 4

Q.1
0 In ΔABC ; with usual notations, $a \cos^2 \frac{C}{2} + c \cos^2 \frac{A}{2} = k$, and a, b, c are in A.P. then $k = \dots$

Ans

1. $\frac{3b}{2}$

2. $2b$

3. $\frac{b}{2}$

4. b

Question Type : MCQ
Question ID : 292995396
Option 1 ID : 2929951583
Option 2 ID : 2929951584
Option 3 ID : 2929951582
Option 4 ID : 2929951581
Status : Answered
Chosen Option : 3

Q.1
1 If $f(x) = (\sec^2 x)^{\cot^2 x}$ for $x \neq 0$ is continuous at $x = 0$, then $f(0) = \dots$

Ans 1. -1

2. $\frac{1}{e}$

3. e

4. 1

Question Type : MCQ
Question ID : 292995369
Option 1 ID : 2929951476
Option 2 ID : 2929951475
Option 3 ID : 2929951474
Option 4 ID : 2929951473
Status : Answered
Chosen Option : 2

Q.1
2 If $A = \begin{bmatrix} 3 & 2 \\ 4 & 3 \end{bmatrix}$ then $\text{adj}(A^{-1}) = \dots$

Ans

1. $\text{adj } A$

2. A

3. A^{-1}

4. $A + I$

Question Type : MCQ

Question ID : 292995373

Option 1 ID : 2929951492

Option 2 ID : 2929951490

Option 3 ID : 2929951491

Option 4 ID : 2929951489

Status : Answered

Chosen Option : 3

Q.1
3 The statement pattern $(q \rightarrow p) \leftrightarrow (\sim q \vee p)$ is...

Ans 1. a tautology

2. equivalent to $(p \vee q)$

3. a contradiction

4. equivalent to $(p \wedge q)$

Question Type : MCQ

Question ID : 292995360

Option 1 ID : 2929951437

Option 2 ID : 2929951439

Option 3 ID : 2929951438

Option 4 ID : 2929951440

Status : Answered

Chosen Option : 2

Q.1
4 $\int e^x [e^{\log(x+3)} + 2] dx =$

Ans 1. $(x + 3)e^x + c$

2. $(x + 2)e^x + c$

3. $(x + 4)e^x + c$

4. $xe^x + c$

Question Type : MCQ

Question ID : 292995392

Option 1 ID : 2929951567

Option 2 ID : 2929951566
Option 3 ID : 2929951568
Option 4 ID : 2929951565
Status : Answered
Chosen Option : 3

Q.1
5 If $2x - y - 2 = 0$ touches the curve $y^2 = ax^2 + b$ at (2,2) then

- Ans
- 1. $a = 2, b = 4$
 - 2. $a = -2, b = 4$
 - 3. $a = -2, b = -4$
 - 4. $a = 2, b = -4$

Question Type : MCQ
Question ID : 292995351
Option 1 ID : 2929951401
Option 2 ID : 2929951402
Option 3 ID : 2929951404
Option 4 ID : 2929951403
Status : Answered
Chosen Option : 1

Q.1
6 The maximum value of $z = 10x + 25y$ subject to the constraints $0 \leq x \leq 3, 0 \leq y \leq 3, x + y \geq 5$ is ...

- Ans
- 1. 95
 - 2. 80
 - 3. 130
 - 4. 105

Question Type : MCQ
Question ID : 292995393
Option 1 ID : 2929951572
Option 2 ID : 2929951570
Option 3 ID : 2929951569
Option 4 ID : 2929951571
Status : Answered
Chosen Option : 3

Q.1
7 If $f(x) = \begin{cases} x - 3 & , \text{for } x > 3 \\ 5 & , \text{for } x \leq 3 \end{cases}$ then $f \circ f(1) = \dots$

- Ans
- 1. 4
 - 2. 2
 - 3. 3
 - 4. 5

Question Type : MCQ
Question ID : 292995375
Option 1 ID : 2929951498
Option 2 ID : 2929951500
Option 3 ID : 2929951499
Option 4 ID : 2929951497

Status : Answered
Chosen Option : 1

Q.1
8 If lines $x - y = k$, $4x - 3y = 20$ and $6x + 5y + 8 = 0$ are concurrent then $k = \dots$

- Ans
- 1. 1.4
 - 2. 2.8
 - 3. 3.2
 - 4. 4.6

Question Type : MCQ
Question ID : 292995376
Option 1 ID : 2929951502
Option 2 ID : 2929951504
Option 3 ID : 2929951501
Option 4 ID : 2929951503
Status : Answered
Chosen Option : 2

Q.1
9 If the sum of radius and height of right circular cylinder is 6 units then its maximum volume is
9 ... Cu. Units.

- Ans
- 1. 64π
 - 2. 32π
 - 3. 16π
 - 4. 4π

Question Type : MCQ
Question ID : 292995389
Option 1 ID : 2929951555
Option 2 ID : 2929951554
Option 3 ID : 2929951553
Option 4 ID : 2929951556
Status : Answered
Chosen Option : 1

Q.2
0 If $\frac{1}{x}$ is an integrating factor of the differential equation $\frac{dy}{dx} + Py = Q$, then $P = \dots$

- Ans
- 1. $-x$
 - 2. $\frac{1}{x}$
 - 3. $-\frac{1}{x}$
 - 4. x

Question Type : MCQ
Question ID : 292995366
Option 1 ID : 2929951464
Option 2 ID : 2929951461
Option 3 ID : 2929951462
Option 4 ID : 2929951463
Status : Answered
Chosen Option : 3

Q.2 If line L_1 passes through the points P (2, 3, 1) and Q (-1, 2, x) and line L_2 passes through the
1 points R(y, -1, 1) and S (0, 1, -1) and L_1 is parallel to L_2 then value of $2x + y$ is

Ans 1. -2
 2. 14
 3. -4
 4. -10

Question Type : MCQ
Question ID : 292995357
Option 1 ID : 2929951427
Option 2 ID : 2929951428
Option 3 ID : 2929951426
Option 4 ID : 2929951425
Status : Answered
Chosen Option : 3

Q.2
2 The value of $\sqrt{\frac{1 - \cos(300)^\circ}{2}}$ is ...

Ans 1. $-\frac{\sqrt{3}}{2}$
 2. $\frac{\sqrt{3}}{2}$
 3. $-\frac{1}{2}$
 4. $\frac{1}{2}$

Question Type : MCQ
Question ID : 292995400
Option 1 ID : 2929951600
Option 2 ID : 2929951598
Option 3 ID : 2929951599
Option 4 ID : 2929951597
Status : Answered
Chosen Option : 1

Q.2
3 If $f(x) = \tan^{-1}(a + bx)$ and $f'(0) = 1$ then $b = \dots$

- Ans
- 1. $a^2 + 1$
 - 2. $a^2 - 1$
 - 3. $a + 1$
 - 4. $a - 1$

Question Type : MCQ
Question ID : 292995380
Option 1 ID : 2929951517
Option 2 ID : 2929951518
Option 3 ID : 2929951519
Option 4 ID : 2929951520
Status : Answered
Chosen Option : 2

Q.2
4 If $\int_0^a 3x^2 dx = 27$ then $a = \dots$

- Ans
- 1. 2
 - 2. -3
 - 3. 3
 - 4. -2

Question Type : MCQ
Question ID : 292995379
Option 1 ID : 2929951514
Option 2 ID : 2929951515
Option 3 ID : 2929951513
Option 4 ID : 2929951516
Status : Answered
Chosen Option : 2

Q.2
5 If point A (4, 6, 10) lies on the line $\vec{r} = (\hat{i} + \hat{j} + \hat{k}) + \lambda (a\hat{i} + b\hat{j} + c\hat{k})$ then $a : b : c = \dots$

- Ans
- 1. 1 : 1 : 1
 - 2. 1 : 2 : 3
 - 3. 2 : 3 : 5
 - 4. 3 : 5 : 9

Question Type : MCQ
Question ID : 292995394
Option 1 ID : 2929951574
Option 2 ID : 2929951576
Option 3 ID : 2929951575
Option 4 ID : 2929951573
Status : Answered
Chosen Option : 2

Q.2
6 If $x = \frac{e^t + e^{-t}}{2}$, $y = \frac{e^t - e^{-t}}{2}$ then $\frac{dx}{dy} = \dots$

- Ans
- 1. $x^t y^t$
 - 2. $\frac{y}{x}$
 - 3. $\frac{x}{y}$
 - 4. xy

Question Type : MCQ
Question ID : 292995355
Option 1 ID : 2929951419
Option 2 ID : 2929951418
Option 3 ID : 2929951417
Option 4 ID : 2929951420
Status : Answered
Chosen Option : 2

Q.2
7 If the function $f(x) = \frac{\log(1+3x)}{\log(1-3x)}$, for $x \neq 0$
 $= k$, for $x = 0$
is continuous at $x = 0$ then $k = \dots$

- Ans
- 1. -3
 - 2. 3
 - 3. 1
 - 4. -1

Question Type : MCQ
Question ID : 292995381
Option 1 ID : 2929951524
Option 2 ID : 2929951523
Option 3 ID : 2929951522
Option 4 ID : 2929951521
Status : Answered
Chosen Option : 2

Q.2
8

The probability density function of r. v. x is given by,

$$f(x) = \frac{1}{2a}, 0 < x < 2a$$

$$= 0, \text{ otherwise}$$

Then $P\left(X < \frac{a}{2}\right) = \dots$

Ans

1. $P\left(X > \frac{a}{2}\right)$

2. $P\left(X > \frac{3a}{2}\right)$

3. $P\left(X > \frac{2a}{3}\right)$

4. $P(X > a)$

Question Type : MCQ

Question ID : 292995390

Option 1 ID : 2929951559

Option 2 ID : 2929951557

Option 3 ID : 2929951560

Option 4 ID : 2929951558

Status : Answered

Chosen Option : 1

Q.2 In ΔABC , with usual notations if $\sin^2 A + \cos^2 B = \cos^2 C$, then ΔABC is...

Ans 1. right angled at A

2. right angled at C

3. right angled at B

4. equilateral triangle

Question Type : MCQ

Question ID : 292995359

Option 1 ID : 2929951433

Option 2 ID : 2929951435

Option 3 ID : 2929951434

Option 4 ID : 2929951436

Status : Answered

Chosen Option : 1

Q.3 The equation of the line containing the latus rectum of the parabola $y^2 = 12x$ is

Ans

1. $x + 3 = 0$

2. $y = 3$

3. $x = 3$

4. $y + 3 = 0$

Question Type : MCQ

Question ID : 292995362

Option 1 ID : 2929951447

Option 2 ID : 2929951445

Option 3 ID : 2929951446

Option 4 ID : 2929951448

Status : Answered

Chosen Option : 1

Q.3 If the tangent to the circle $x^2 + y^2 = 25$ at point A (3,4) is parallel to one of the lines represented by $x^2 + 2hxy + 4y^2 = 0$, then the slope of the other line is...

Ans 1. $-1/3$

2. 2

3. 3

4. -2

Question Type : MCQ

Question ID : 292995358

Option 1 ID : 2929951430

Option 2 ID : 2929951431

Option 3 ID : 2929951429

Option 4 ID : 2929951432

Status : Answered

Chosen Option : 1

Q.3
2 If $P(\theta)$ is a point on the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ whose foci are S and S' then $SP \cdot S'P = \dots$

Ans 1. $a^2 \tan^2 \theta + b^2 \sec^2 \theta$

2. $a^2 \sec^2 \theta + b^2 \tan^2 \theta$

3. $a^2 \tan^2 \theta - b^2 \sec^2 \theta$

4. $a^2 \sec^2 \theta - b^2 \tan^2 \theta$

Question Type : MCQ

Question ID : 292995388

Option 1 ID : 2929951552

Option 2 ID : 2929951549

Option 3 ID : 2929951551

Option 4 ID : 2929951550

Status : Answered

Chosen Option : 3

Q.3
3

If $A = \begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & a & 1 \end{bmatrix}$ and $A^{-1} = \frac{1}{2} \begin{bmatrix} 1 & -1 & 1 \\ -8 & 6 & 2c \\ 5 & -3 & 1 \end{bmatrix}$ then $a + c = \dots$

- Ans
- 1. -2
 - 2. 2
 - 3. 0
 - 4. 1

Question Type : MCQ

Question ID : 292995397

Option 1 ID : 2929951587

Option 2 ID : 2929951585

Option 3 ID : 2929951586

Option 4 ID : 2929951588

Status : Answered

Chosen Option : 3

Q.3 Volume of the tetrahedron whose vertices are A (2, -1, 0), B (-3, 0, 4), C (0, -1, 4) and D (0, -5, 10)
4 is ...

- Ans
- 1. 36 cubic unit
 - 2. 42 cubic unit
 - 3. 63 cubic unit
 - 4. 6 cubic unit

Question Type : MCQ

Question ID : 292995395

Option 1 ID : 2929951577

Option 2 ID : 2929951580

Option 3 ID : 2929951578

Option 4 ID : 2929951579

Status : Answered

Chosen Option : 3

Q.3 Two dice are thrown 5 times. The probability that both of the dice show equal scores three
5 times is....

Ans

1. $\frac{(5)^3}{(3)^5 \times (2)^5}$

2. $\frac{(5)^3}{(3)^5 \times (2)^3}$

✓ 3. $\frac{(5)^3}{(3)^5 \times (2)^4}$

✗ 4. $\frac{(5)^2}{(3)^5 \times (2)^4}$

Question Type : MCQ

Question ID : 292995377

Option 1 ID : 2929951506

Option 2 ID : 2929951508

Option 3 ID : 2929951505

Option 4 ID : 2929951507

Status : Answered

Chosen Option : 2

Q.3
6 The 7th term of the sequence $\sqrt{3}, \frac{1}{\sqrt{3}}, \frac{1}{3\sqrt{3}}, \frac{1}{9\sqrt{3}}$ is...

Ans

✗ 1. $\frac{\sqrt{3}}{81}$

✗ 2. $\frac{1}{243}$

✓ 3. $\frac{1}{243\sqrt{3}}$

✗ 4. $\frac{1}{81\sqrt{3}}$

Question Type : MCQ

Question ID : 292995361

Option 1 ID : 2929951441

Option 2 ID : 2929951444

Option 3 ID : 2929951443

Option 4 ID : 2929951442

Status : Answered

Chosen Option : 3

Q.3
7

In ΔABC , P is point on BC such that $3\overline{BP} = 2\overline{PC}$ and Q is a point on AC such that $4\overline{CQ} = \overline{QA}$. If AP and BQ intersect at the point R, then R divides BQ internally in the ratio....

- Ans
- 1. 6:5
 - 2. 10:1
 - 3. 5:6
 - 4. 1:10

Question Type : MCQ
 Question ID : 292995371
 Option 1 ID : 2929951482
 Option 2 ID : 2929951483
 Option 3 ID : 2929951481
 Option 4 ID : 2929951484
 Status : Answered
 Chosen Option : 1

Q.3 If the line $x + 2 = 0$ coincides with one of the lines represented by the equation $x^2 + 2xy + 4y + k = 0$, then $k = \dots$

- 8
- Ans
- 1. 2
 - 2. 1
 - 3. -4
 - 4. 4

Question Type : MCQ
 Question ID : 292995384
 Option 1 ID : 2929951535
 Option 2 ID : 2929951536
 Option 3 ID : 2929951534
 Option 4 ID : 2929951533
 Status : Answered
 Chosen Option : 1

Q.3 A player tosses 2 coins. He wins rupees 1/- if no head appears, rupees 2/- if one head appears 9 and rupees 5/- if two heads appear then his expected winning amount is rupees

- Ans
- 1. $\frac{3}{2}$
 - 2. $\frac{7}{2}$
 - 3. $\frac{1}{2}$
 - 4. $\frac{5}{2}$

Question Type : MCQ
 Question ID : 292995365
 Option 1 ID : 2929951458
 Option 2 ID : 2929951460

Option 3 ID : 2929951457
Option 4 ID : 2929951459
Status : Answered
Chosen Option : 3

Q.4
0 If $\vec{a}, \vec{b}, \vec{c}$ are non-zero, non coplanar vectors then $[\vec{a} - 2\vec{b} \quad 2\vec{b} + \vec{c} \quad \vec{c}] = \dots$

Ans 1. 0

2. $[\vec{a} \quad \vec{b} \quad \vec{c}]$

3. $3 [\vec{a} \quad \vec{b} \quad \vec{c}]$

4. $2 [\vec{a} \quad \vec{b} \quad \vec{c}]$

Question Type : MCQ
Question ID : 292995383
Option 1 ID : 2929951530
Option 2 ID : 2929951529
Option 3 ID : 2929951531
Option 4 ID : 2929951532
Status : Answered
Chosen Option : 4

Q.4
1 The minimum value of $z = 4x + 5y$ subject to $y \leq 2x, x \leq 2y, x + y \geq 6, x \geq 0, y \geq 0$ is...

Ans 1. 12

2. 28

3. 26

4. 10

Question Type : MCQ
Question ID : 292995356
Option 1 ID : 2929951422
Option 2 ID : 2929951424
Option 3 ID : 2929951423
Option 4 ID : 2929951421
Status : Answered
Chosen Option : 4

Q.4
2 Which of the following statement pattern is a Contradiction?

Ans

1. $(p \wedge q) \vee \sim p$

2. $(p \wedge q) \rightarrow q$

3. $(p \wedge q) \rightarrow p$

4. $(p \wedge q) \wedge \sim p$

Question Type : MCQ

Question ID : 292995374

Option 1 ID : 2929951494

Option 2 ID : 2929951496

Option 3 ID : 2929951493

Option 4 ID : 2929951495

Status : Answered

Chosen Option : 4

Q.4
3 If $\operatorname{cosec} A + \cot A = \frac{11}{2}$ then $\tan A = \dots$

Ans

1. $\frac{21}{22}$

2. $\frac{15}{16}$

3. $\frac{44}{117}$

4. $\frac{117}{44}$

Question Type : MCQ

Question ID : 292995363

Option 1 ID : 2929951449

Option 2 ID : 2929951450

Option 3 ID : 2929951451

Option 4 ID : 2929951452

Status : Answered

Chosen Option : 2

Q.4
4 The statement pattern $[p \wedge (q \vee r)] \vee [\sim r \wedge \sim q \wedge p]$ is equivalent to ...

Ans

✓ 1. p

✗ 2. $p \vee r$

✗ 3. q

✗ 4. $p \wedge q$

Question Type : MCQ

Question ID : 292995386

Option 1 ID : 2929951543

Option 2 ID : 2929951541

Option 3 ID : 2929951544

Option 4 ID : 2929951542

Status : Answered

Chosen Option : 4

Q.4
5

If $3 \sin x + 4 \cos y = 6$ and $4 \sin y + 3 \cos x = 1$, then $x + y = \dots$

Ans

✗ 1. $2n\pi \pm \frac{\pi}{6}, n \in Z$

✗ 2. $n\pi + (-1)^n \frac{\pi}{3}, n \in Z$

✗ 3. $2n\pi \pm \frac{\pi}{3}, n \in Z$

✓ 4. $n\pi + (-1)^n \frac{\pi}{6}, n \in Z$

Question Type : MCQ

Question ID : 292995372

Option 1 ID : 2929951487

Option 2 ID : 2929951486

Option 3 ID : 2929951488

Option 4 ID : 2929951485
Status : Answered
Chosen Option : 1

Q.4
6 The solution of the differential equation $\frac{dy}{dx} = \frac{y^2}{xy-x^2}$ is

Ans

✓ 1. $e^{\frac{y}{x}} = ky$

✗ 2. $e^{\frac{-y}{x}} = kx$

✗ 3. $e^{\frac{y}{x}} = kx$

✗ 4. $e^{\frac{-y}{x}} = ky$

Question Type : MCQ
Question ID : 292995352
Option 1 ID : 2929951405
Option 2 ID : 2929951408
Option 3 ID : 2929951406
Option 4 ID : 2929951407
Status : Answered
Chosen Option : 1

Q.4
7 If the volume of a spherical balloon increase at the rate $45 (ft)^3/min$, then the rate of increase in its radius when it is equal to 15 ft , is _____ ft/min

Ans

✗ 1. $\frac{1}{30\pi}$

✓ 2. $\frac{1}{20\pi}$

✗ 3. $\frac{1}{25\pi}$

✗ 4. $\frac{1}{15\pi}$

Question Type : MCQ
Question ID : 292995364
Option 1 ID : 2929951454
Option 2 ID : 2929951455
Option 3 ID : 2929951456
Option 4 ID : 2929951453

Status : Answered
Chosen Option : 1

Q.4
8 The foot of the perpendicular from the point (7,14, 5) to the plane $2x + 4y - z = 2$ is

- Ans
- 1. (1,1,4)
 - 2. (8,2,1)
 - 3. (1,2,8)
 - 4. (1,8,2)

Question Type : MCQ
Question ID : 292995370
Option 1 ID : 2929951478
Option 2 ID : 2929951477
Option 3 ID : 2929951479
Option 4 ID : 2929951480
Status : Answered
Chosen Option : 4

Q.4
9 $\int \frac{1}{x(x^{2019} + 1)} dx =$

- Ans
- 1. $\frac{1}{2019} \log \left| \frac{x^{2019}}{x^{2019} + 1} \right| + C$
 - 2. $\frac{1}{2019} \log |x(x^{2019} + 1)| + C$
 - 3. $\frac{1}{2019} \log \left| \frac{x^{2019} + 1}{x^{2019}} \right| + C$
 - 4. $\log |x^{2019} + 1| + C$

Question Type : MCQ
Question ID : 292995367
Option 1 ID : 2929951467
Option 2 ID : 2929951466
Option 3 ID : 2929951468
Option 4 ID : 2929951465
Status : Answered
Chosen Option : 3

Q.5 If 16 and 4 are A.M. and H.M. of two positive numbers respectively, then their G.M. is....
0

- Ans
- 1. 8
 - 2. 64
 - 3. 16
 - 4. 4

Question Type : MCQ
Question ID : 292995387
Option 1 ID : 2929951547
Option 2 ID : 2929951545
Option 3 ID : 2929951548
Option 4 ID : 2929951546
Status : Answered
Chosen Option : 1

Section : Biology

Q.1 The common phase for aerobic and anaerobic respiration is called

- Ans 1. Krebs cycle
 2. EMP-pathway
 3. Acetylation of pyruvate
 4. ETS

Question Type : MCQ
Question ID : 292995404
Option 1 ID : 2929951614
Option 2 ID : 2929951613
Option 3 ID : 2929951616
Option 4 ID : 2929951615
Status : Answered
Chosen Option : 2

Q.2 The technique PCR is used in DNA finger printing for ...

- Ans 1. DNA amplification
 2. DNA isolation
 3. DNA fragmentation
 4. Hybridization

Question Type : MCQ
Question ID : 292995464
Option 1 ID : 2929951856
Option 2 ID : 2929951855
Option 3 ID : 2929951854
Option 4 ID : 2929951853
Status : Answered
Chosen Option : 1

Q.3 Thalassemia is a quantitative abnormality of _____ chain synthesis.

- Ans 1. polysaccharide
 2. polypeptide
 3. poly lipo-protein
 4. polystearic

Question Type : MCQ
Question ID : 292995471
Option 1 ID : 2929951881
Option 2 ID : 2929951882

Option 3 ID : 2929951883
Option 4 ID : 2929951884
Status : Answered
Chosen Option : 1

Q.4 During Calvin cycle RuBP gets regenerated through several biochemical reactions called

- Ans
- 1. dephosphorylation reactions
 - 2. oxidation reduction reactions
 - 3. Sugar phosphate inter conversions
 - 4. glycolytic reversal reactions

Question Type : MCQ
Question ID : 292995419
Option 1 ID : 2929951675
Option 2 ID : 2929951674
Option 3 ID : 2929951673
Option 4 ID : 2929951676
Status : Answered
Chosen Option : 1

Q.5 Testes are connected to the wall of scrotum by ...

- Ans
- 1. Glans
 - 2. Gubernaculum
 - 3. Prepuce
 - 4. Dartos tunic muscles

Question Type : MCQ
Question ID : 292995462
Option 1 ID : 2929951846
Option 2 ID : 2929951848
Option 3 ID : 2929951845
Option 4 ID : 2929951847
Status : Answered
Chosen Option : 4

Q.6 During photorespiration , which amino acid is formed in the peroxisome by oxidation of glyoxylate ?

- Ans
- 1. Glycine
 - 2. Serine
 - 3. Valine
 - 4. Leucine

Question Type : MCQ
Question ID : 292995408
Option 1 ID : 2929951630
Option 2 ID : 2929951631
Option 3 ID : 2929951632
Option 4 ID : 2929951629
Status : Answered
Chosen Option : 2

Q.7 Polygalacturonase in tomato is aenzyme.

Ans

- 1. pectin producing
- 2. flavour producing
- 3. shelf life increasing
- 4. pectin degrading

Question Type : MCQ
Question ID : 292995441
Option 1 ID : 2929951764
Option 2 ID : 2929951763
Option 3 ID : 2929951761
Option 4 ID : 2929951762
Status : Answered
Chosen Option : 2

Q.8 Which one of the following is correct about nucleoid of a prokaryote?

- Ans 1. It has DNA molecule
- 2. It has nuclear envelope
 - 3. It has histone proteins
 - 4. It has well organised chromosome

Question Type : MCQ
Question ID : 292995445
Option 1 ID : 2929951779
Option 2 ID : 2929951777
Option 3 ID : 2929951780
Option 4 ID : 2929951778
Status : Answered
Chosen Option : 3

Q.9 Man-Like character of *Australopithecus* was ...

- Ans 1. Distinct lumbar curvature
- 2. Prognathous face
 - 3. Absence of chin
 - 4. Protruding eye-brow ridges.

Question Type : MCQ
Question ID : 292995484
Option 1 ID : 2929951935
Option 2 ID : 2929951933
Option 3 ID : 2929951934
Option 4 ID : 2929951936
Status : Answered
Chosen Option : 2

Q.1 Two alternative forms of a gene present on identical loci of homologous chromosomes are called

- Ans 1. alleles
- 2. polygenes
 - 3. factors
 - 4. traits

Question Type : MCQ
Question ID : 292995403
Option 1 ID : 2929951612
Option 2 ID : 2929951609
Option 3 ID : 2929951610
Option 4 ID : 2929951611
Status : Answered
Chosen Option : 1

Q.1 Baby Neha, two years old is showing symptoms of protruding belly, bulging eyes, oedema of
1 lower legs. She is probably suffering from ...

- Ans
- 1. Constipation
 - 2. Indigestion
 - 3. Marasmus
 - 4. Kwashiorkor

Question Type : MCQ
Question ID : 292995485
Option 1 ID : 2929951939
Option 2 ID : 2929951940
Option 3 ID : 2929951937
Option 4 ID : 2929951938
Status : Answered
Chosen Option : 4

Q.1 A codon is present in....
2

- Ans
- 1. DNA
 - 2. m-RNA
 - 3. r-RNA
 - 4. t-RNA

Question Type : MCQ
Question ID : 292995416
Option 1 ID : 2929951664
Option 2 ID : 2929951663
Option 3 ID : 2929951662
Option 4 ID : 2929951661
Status : Answered
Chosen Option : 3

Q.1 Gregor Mendel was NOT known as ...
3

- Ans
- 1. Genetecist
 - 2. Teacher
 - 3. Preist
 - 4. Physicist

Question Type : MCQ
Question ID : 292995440
Option 1 ID : 2929951758
Option 2 ID : 2929951760
Option 3 ID : 2929951757
Option 4 ID : 2929951759

Status : **Answered**
Chosen Option : 3

Q.1 Opioids are obtained from _____ plant.
4

- Ans
- 1. Hemp
 - 2. *Datura*
 - 3. Poppy
 - 4. Coca

Question Type : MCQ
Question ID : 292995486
Option 1 ID : 2929951942
Option 2 ID : 2929951944
Option 3 ID : 2929951943
Option 4 ID : 2929951941
Status : **Answered**
Chosen Option : 2

Q.1 In a cross between $Rr \times rr$, which one of the following characteristic will be observed in the
5 offspring?

- Ans
- 1. 75% are recessive
 - 2. 50% are recessive
 - 3. All are dominant
 - 4. All are recessive

Question Type : MCQ
Question ID : 292995423
Option 1 ID : 2929951691
Option 2 ID : 2929951692
Option 3 ID : 2929951689
Option 4 ID : 2929951690
Status : **Answered**
Chosen Option : 1

Q.1 Pollination through agency of bats is called
6

- Ans
- 1. Chiropterophily
 - 2. Ornithophily
 - 3. Malacophily
 - 4. Hydrophily

Question Type : MCQ
Question ID : 292995438
Option 1 ID : 2929951750
Option 2 ID : 2929951749
Option 3 ID : 2929951752
Option 4 ID : 2929951751
Status : **Answered**
Chosen Option : 1

Q.1 Which one of the following enzyme involved in alcoholic fermentation of sucrose ?
7

- Ans
- 1. Oxidase
 - 2. Zymase
 - 3. Hexokinase
 - 4. Isomerase

Question Type : MCQ
Question ID : 292995444
Option 1 ID : 2929951775
Option 2 ID : 2929951774
Option 3 ID : 2929951776
Option 4 ID : 2929951773
Status : Answered
Chosen Option : 3

Q.1 Chipko movement was started inin the year 1974.
8

- Ans
- 1. Pune
 - 2. Bangalore
 - 3. Jodhpur
 - 4. Garhwal

Question Type : MCQ
Question ID : 292995409
Option 1 ID : 2929951636
Option 2 ID : 2929951635
Option 3 ID : 2929951633
Option 4 ID : 2929951634
Status : Answered
Chosen Option : 3

Q.1 Inbreeding depression can be overcome by single
9

- Ans
- 1. Interspecific hybridization
 - 2. Crossbreeding
 - 3. Test crossing
 - 4. Outcrossing

Question Type : MCQ
Question ID : 292995453
Option 1 ID : 2929951811
Option 2 ID : 2929951809
Option 3 ID : 2929951812
Option 4 ID : 2929951810
Status : Answered
Chosen Option : 3

Q.2 PEPCase fixes CO₂ in ...
0

- Ans
- 1. Calvin cycle
 - 2. bundle sheath cells of C₄ plants
 - 3. The mesophyll cells of C₄ plants
 - 4. high concentration of CO₂

Question Type : MCQ
Question ID : 292995442
Option 1 ID : 2929951765
Option 2 ID : 2929951767
Option 3 ID : 2929951768
Option 4 ID : 2929951766
Status : Answered
Chosen Option : 1

Q.2 Agar-agar is used asin plant tissue culture.

1

- Ans 1. nutrient medium
 2. growth factor
 3. Fusogenic agent
 4. non solidifying agent

Question Type : MCQ
Question ID : 292995436
Option 1 ID : 2929951741
Option 2 ID : 2929951743
Option 3 ID : 2929951744
Option 4 ID : 2929951742
Status : Answered
Chosen Option : 3

Q.2 Wall of the carotid bodies have

2

- Ans 1. Photoreceptors for detecting the nature of light
 2. Chemoreceptors for detecting smell
 3. Baroreceptors for detecting blood pressure
 4. Thermoereceptors for detecting temperture

Question Type : MCQ
Question ID : 292995466
Option 1 ID : 2929951862
Option 2 ID : 2929951864
Option 3 ID : 2929951863
Option 4 ID : 2929951861
Status : Answered
Chosen Option : 1

Q.2 Spermatid formed at the end of meiosis-II is non-motile. It has to undergo.....to become functional and motile spermatozoan.

3

- Ans 1. metagenesis
 2. spermatogenesis
 3. spermiogenesis
 4. parthenogenesis

Question Type : MCQ
Question ID : 292995491
Option 1 ID : 2929951961
Option 2 ID : 2929951962
Option 3 ID : 2929951964

Option 4 ID : 2929951963
Status : Answered
Chosen Option : 2

Q.2 Dr.Norman Borlaug developed...
4

- Ans 1. semidwarf variety of wheat
 2. tall variety of wheat
 3. semidwarf variety of rice
 4. tall variety of rice

Question Type : MCQ
Question ID : 292995447
Option 1 ID : 2929951788
Option 2 ID : 2929951786
Option 3 ID : 2929951785
Option 4 ID : 2929951787
Status : Answered
Chosen Option : 1

Q.2 Which among the following is the largest taxon ?
5

- Ans 1. Ranales
 2. Tiliaceae
 3. Gamopetalae
 4. Hibiscus

Question Type : MCQ
Question ID : 292995430
Option 1 ID : 2929951719
Option 2 ID : 2929951718
Option 3 ID : 2929951720
Option 4 ID : 2929951717
Status : Answered
Chosen Option : 2

Q.2 Which one of the following is not an unsaturated fatty acid ?
6

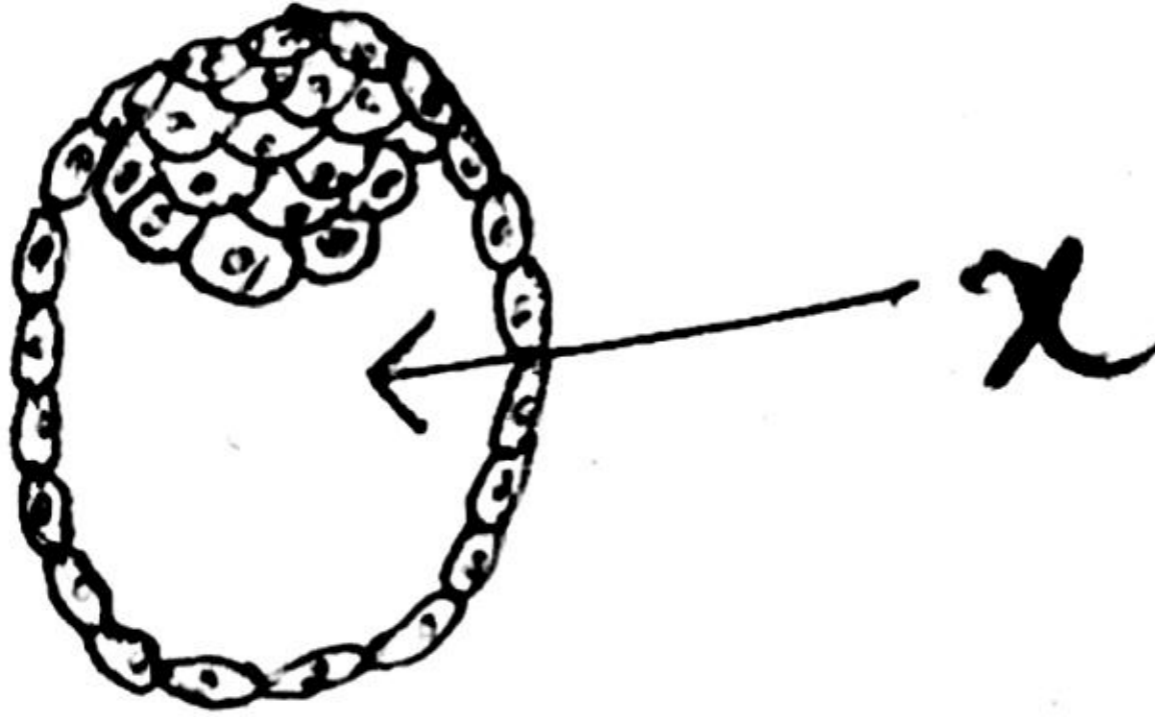
- Ans 1. Linoleic acid
 2. Oleic acid
 3. Palmitic acid
 4. Palmitoleic acid

Question Type : MCQ
Question ID : 292995450
Option 1 ID : 2929951800
Option 2 ID : 2929951797
Option 3 ID : 2929951798
Option 4 ID : 2929951799
Status : Answered
Chosen Option : 2

Q.2

7

In the given diagram of v.s. of Blastula,
What does 'X' indicate ?



- Ans
- 1. Archenteron
 - 2. Antrum
 - 3. Enteron
 - 4. Blastocoel

Question Type : MCQ
Question ID : 292995499
Option 1 ID : 2929951995
Option 2 ID : 2929951993
Option 3 ID : 2929951994
Option 4 ID : 2929951996
Status : Answered
Chosen Option : 4

Q.2 Production of beer from barley through the fermentation process includes steps as
8

- Ans
- 1. Boiling, distillation, fermentation
 - 2. Filtration, distillation, sedimentation
 - 3. Malting, mashing, fermentation
 - 4. Drying, spawning, fermentation, distillation

Question Type : MCQ
Question ID : 292995412
Option 1 ID : 2929951645
Option 2 ID : 2929951648
Option 3 ID : 2929951647
Option 4 ID : 2929951646
Status : Answered
Chosen Option : 2

Q.2 In cellular respiration, when proteins are used as substrate then what is the value of RQ?
9

Ans

- 1. Always1
- 2. About 0.9
- 3. Always infinity
- 4. About 0.7

Question Type : MCQ
Question ID : 292995415
Option 1 ID : 2929951657
Option 2 ID : 2929951658
Option 3 ID : 2929951660
Option 4 ID : 2929951659
Status : Answered
Chosen Option : 1

Q.3 How many ATP molecules are generated through Electron Transport System in aerobic
0 respiration from one glucose molecule?

- Ans
- 1. 36 ATP
 - 2. 38 ATP
 - 3. 34ATP
 - 4. 40 ATP

Question Type : MCQ
Question ID : 292995411
Option 1 ID : 2929951643
Option 2 ID : 2929951642
Option 3 ID : 2929951644
Option 4 ID : 2929951641
Status : Answered
Chosen Option : 2

Q.3 In prokaryotes.... is the outermost covering of the cell envelope.
1

- Ans
- 1. Plasma membrane
 - 2. Tonoplast
 - 3. Cell wall
 - 4. Glycocalyx

Question Type : MCQ
Question ID : 292995494
Option 1 ID : 2929951974
Option 2 ID : 2929951976
Option 3 ID : 2929951973
Option 4 ID : 2929951975
Status : Answered
Chosen Option : 3

Q.3 A biologist studied the population of tiger in tadoba national park (Maharashtra). He found that
2 the average natality was 150, average mortality 140, immigration 10 and emigration 20. The net increase in population was_____.

- Ans
- 1. 15
 - 2. 10
 - 3. 0

X 4.5

Question Type : MCQ
Question ID : 292995500
Option 1 ID : 2929951997
Option 2 ID : 2929952000
Option 3 ID : 2929951999
Option 4 ID : 2929951998
Status : Answered
Chosen Option : 2

Q.3 Peristaltic movements are carried out by
3

- Ans
- X** 1. Cardiac muscles
 - ✓** 2. Visceral muscles
 - X** 3. Voluntary muscles
 - X** 4. Dartos tunic muscles

Question Type : MCQ
Question ID : 292995492
Option 1 ID : 2929951968
Option 2 ID : 2929951965
Option 3 ID : 2929951966
Option 4 ID : 2929951967
Status : Answered
Chosen Option : 4

Q.3 Which one of the following is NOT artificial vegetative propagation?
4

- Ans
- X** 1. Grafting
 - X** 2. Budding
 - X** 3. Cutting
 - ✓** 4. Runner

Question Type : MCQ
Question ID : 292995414
Option 1 ID : 2929951656
Option 2 ID : 2929951653
Option 3 ID : 2929951654
Option 4 ID : 2929951655
Status : Answered
Chosen Option : 4

Q.3 Which one of the following enzyme is used for polymerisation of DNA in PCR technique ?
5

- Ans
- X** 1. DNA Polymerase-II
 - X** 2. RNA Polymerase
 - X** 3. DNA Polymerase-I
 - ✓** 4. Taq Polymerase

Question Type : MCQ
Question ID : 292995449
Option 1 ID : 2929951794

Option 2 ID : 2929951795
Option 3 ID : 2929951793
Option 4 ID : 2929951796
Status : Answered
Chosen Option : 3

Q.3 Plantation of trees in barren & unexploited land to improve environment is known as.....
6

- Ans
- 1. Reforestation
 - 2. Social forestry
 - 3. Aforestation
 - 4. Deforestation

Question Type : MCQ
Question ID : 292995417
Option 1 ID : 2929951665
Option 2 ID : 2929951668
Option 3 ID : 2929951667
Option 4 ID : 2929951666
Status : Answered
Chosen Option : 1

Q.3 The sum total of genes of all individuals of an interbreeding population is called
7

- Ans
- 1. gene frequency
 - 2. gene mutation
 - 3. gene pool
 - 4. gene flow

Question Type : MCQ
Question ID : 292995459
Option 1 ID : 2929951836
Option 2 ID : 2929951833
Option 3 ID : 2929951835
Option 4 ID : 2929951834
Status : Answered
Chosen Option : 3

Q.3 Primary goal of the Human Genome Project (HGP) was to generate two main types of maps
8 namely,maps andmaps

- Ans
- 1. Mutation; Physical
 - 2. Genetic linkage; physical
 - 3. Racial ; physical
 - 4. Genetic linkage; mutation

Question Type : MCQ
Question ID : 292995488
Option 1 ID : 2929951949
Option 2 ID : 2929951950
Option 3 ID : 2929951952
Option 4 ID : 2929951951
Status : Answered
Chosen Option : 1

Q.3 Papaya plant always shows...

9

- Ans
- 1. autogamy
 - 2. dichogamy
 - 3. geitonogamy
 - 4. xenogamy

Question Type : MCQ
Question ID : 292995406
Option 1 ID : 2929951621
Option 2 ID : 2929951623
Option 3 ID : 2929951622
Option 4 ID : 2929951624
Status : Answered
Chosen Option : 4

Q.4 Which hormone is secreted by Graafian follicle of ovary ?

0

- Ans
- 1. LH
 - 2. FSH
 - 3. Progesterone
 - 4. Oestrogen

Question Type : MCQ
Question ID : 292995473
Option 1 ID : 2929951892
Option 2 ID : 2929951890
Option 3 ID : 2929951889
Option 4 ID : 2929951891
Status : Answered
Chosen Option : 3

Q.4 Gemmule formation takes place in ...

1

- Ans
- 1. Amoeba
 - 2. Planaria
 - 3. Hydra
 - 4. Ephydatia

Question Type : MCQ
Question ID : 292995479
Option 1 ID : 2929951916
Option 2 ID : 2929951915
Option 3 ID : 2929951913
Option 4 ID : 2929951914
Status : Answered
Chosen Option : 4

Q.4 Out of 18 ATP molecules required during the synthesis of a glucose molecule how many are used in the regeneration of 6 RuBP?

- 2
- Ans
- 1. 3
 - 2. 4

✓ 3. 6

✗ 4. 5

Question Type : MCQ
Question ID : 292995401
Option 1 ID : 2929951601
Option 2 ID : 2929951602
Option 3 ID : 2929951604
Option 4 ID : 2929951603
Status : Answered
Chosen Option : 2

Q.4 Father of Electrocardiography is

3

- Ans
- ✗ 1. James Watson
 - ✗ 2. Johann Mendel
 - ✓ 3. Einthoven
 - ✗ 4. William Harvey

Question Type : MCQ
Question ID : 292995489
Option 1 ID : 2929951955
Option 2 ID : 2929951954
Option 3 ID : 2929951953
Option 4 ID : 2929951956
Status : Answered
Chosen Option : 1

Q.4 If coronary sinus : right atrium , then, left ventricle : _____

4

- Ans
- ✗ 1. Pulmonary vein
 - ✓ 2. Systemic aorta
 - ✗ 3. Pulmonary aorta
 - ✗ 4. Left atrium

Question Type : MCQ
Question ID : 292995482
Option 1 ID : 2929951927
Option 2 ID : 2929951928
Option 3 ID : 2929951926
Option 4 ID : 2929951925
Status : Answered
Chosen Option : 2

Q.4 With reference to age structure, the number of individuals in a growing population has

5individuals.

- Ans
- ✗ 1. equal number of pre and post reproductive
 - ✗ 2. large number of post reproductive
 - ✗ 3. least number of reproductive
 - ✓ 4. larger number of pre reproductive

Question Type : MCQ
Question ID : 292995483

Option 1 ID : 2929951930
Option 2 ID : 2929951932
Option 3 ID : 2929951931
Option 4 ID : 2929951929
Status : Answered
Chosen Option : 4

Q.4 The factor which directly does NOT affect the rate of photosynthesis is...
6

- Ans
- 1. CO₂ concentration
 - 2. Temperature
 - 3. Water
 - 4. Light

Question Type : MCQ
Question ID : 292995431
Option 1 ID : 2929951723
Option 2 ID : 2929951724
Option 3 ID : 2929951722
Option 4 ID : 2929951721
Status : Answered
Chosen Option : 2

Q.4 The proportion of Hydrogen to Oxygen in carbohydrates is_____respectively.
7

- Ans
- 1. 2:1
 - 2. 2:3
 - 3. 1:2
 - 4. 3:2

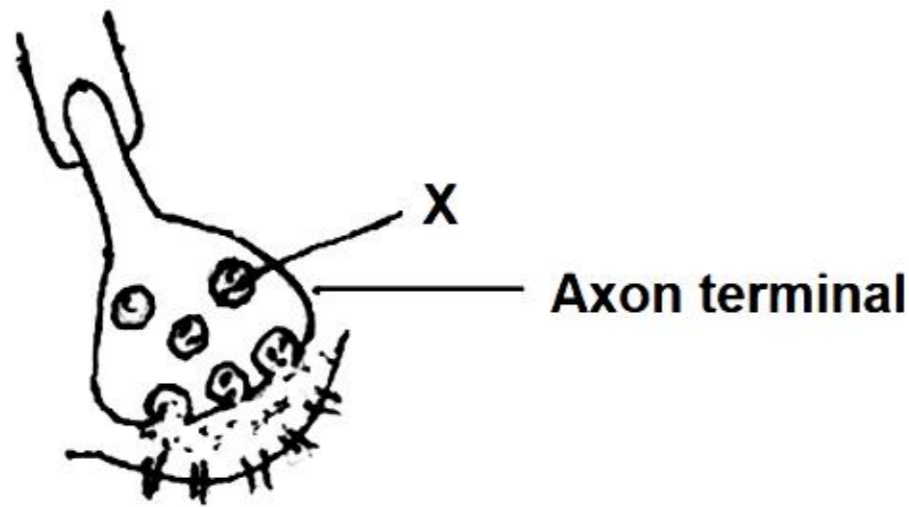
Question Type : MCQ
Question ID : 292995435
Option 1 ID : 2929951737
Option 2 ID : 2929951740
Option 3 ID : 2929951739
Option 4 ID : 2929951738
Status : Answered
Chosen Option : 1

Q.4 Hormone relaxin is secreted by ...
8

- Ans
- 1. Corpus Callosum
 - 2. Graafian follicle
 - 3. Corpus luteum
 - 4. Corpora striata

Question Type : MCQ
Question ID : 292995480
Option 1 ID : 2929951919
Option 2 ID : 2929951918
Option 3 ID : 2929951917
Option 4 ID : 2929951920
Status : Answered
Chosen Option : 3

Q.4 In the given diagram the fluid/secretion found in part X is _____.



- Ans
- 1. Cerebrospinal fluid
 - 2. Acetyl Choline
 - 3. Endolymph
 - 4. Extracellular fluid

Question Type : MCQ
Question ID : 292995452
Option 1 ID : 2929951806
Option 2 ID : 2929951805
Option 3 ID : 2929951807
Option 4 ID : 2929951808
Status : Answered
Chosen Option : 2

Q.5 Example of lethal gene is...

- Ans
- 1. wings in *Drosophila*
 - 2. colour of flower in four O' clock plant
 - 3. sickle cell anaemia
 - 4. kernel colour of wheat

Question Type : MCQ
Question ID : 292995410
Option 1 ID : 2929951639
Option 2 ID : 2929951640
Option 3 ID : 2929951638
Option 4 ID : 2929951637
Status : Answered
Chosen Option : 1

Q.5 Opening & closing of stomata is due to ...

- Ans
- 1. gaseous exchange
 - 2. change in turgor pressure of guard cells
 - 3. guttation
 - 4. respiration

Question Type : MCQ

Question ID : 292995439
Option 1 ID : 2929951753
Option 2 ID : 2929951754
Option 3 ID : 2929951756
Option 4 ID : 2929951755
Status : Answered
Chosen Option : 4

Q.5 Which of the following organisms show both cell wall & chlorophyll ?

2

- Ans
- 1. Euglena
 - 2. Agaricus
 - 3. Funaria
 - 4. Amoeba

Question Type : MCQ
Question ID : 292995407
Option 1 ID : 2929951626
Option 2 ID : 2929951628
Option 3 ID : 2929951625
Option 4 ID : 2929951627
Status : Answered
Chosen Option : 1

Q.5 The wall of eye ball is formed by

3

- Ans
- 1. Outer sclera, middle choroid & inner retina
 - 2. Outer choroid , middle sclera, & inner fovea
 - 3. Outer sclera, middle cornea, & Inner retina
 - 4. Outer choroid, middle cornea & inner fovea

Question Type : MCQ
Question ID : 292995495
Option 1 ID : 2929951977
Option 2 ID : 2929951979
Option 3 ID : 2929951978
Option 4 ID : 2929951980
Status : Answered
Chosen Option : 3

Q.5 The part of chromosome beyond nucleolar organizer is termed as

4

- Ans
- 1. Telomere
 - 2. Satellite
 - 3. Chromomere
 - 4. Centromere

Question Type : MCQ
Question ID : 292995465
Option 1 ID : 2929951857
Option 2 ID : 2929951858
Option 3 ID : 2929951859
Option 4 ID : 2929951860
Status : Answered

Chosen Option : 3

Q.5 Mushrooms are rich in
5

- Ans 1. vitamins and proteins
 2. amino acids and starch
 3. minerals and starch
 4. proteins and lipids

Question Type : MCQ
Question ID : 292995429
Option 1 ID : 2929951713
Option 2 ID : 2929951714
Option 3 ID : 2929951715
Option 4 ID : 2929951716
Status : Answered
Chosen Option : 1

Q.5 Which substance is released by thrombocytes while initiating blood clotting process ?
6

- Ans 1. Anti thrombin
 2. Thromboplastin
 3. Heparin
 4. Histamine

Question Type : MCQ
Question ID : 292995477
Option 1 ID : 2929951906
Option 2 ID : 2929951908
Option 3 ID : 2929951907
Option 4 ID : 2929951905
Status : Answered
Chosen Option : 2

Q.5 What will be correct sequence of these according to ascending order of their molecular weights
7 ?

- Ans 1. tRNA, DNA, rRNA
 2. tRNA, rRNA, DNA
 3. DNA, rRNA, tRNA
 4. rRNA, tRNA, DNA

Question Type : MCQ
Question ID : 292995448
Option 1 ID : 2929951792
Option 2 ID : 2929951791
Option 3 ID : 2929951790
Option 4 ID : 2929951789
Status : Answered
Chosen Option : 3

Q.5 Euchromatin is the part of chromatin material, which is ..
8

- Ans 1. genetically inert

- 2. darkly stained
- 3. genetically active
- 4. condensed region of chromatin

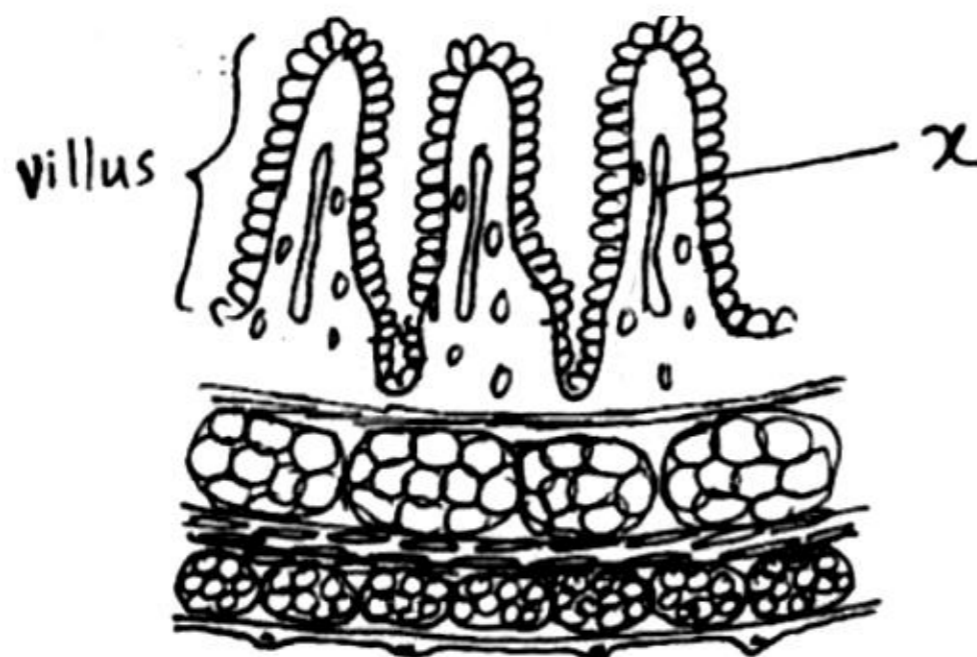
Question Type : MCQ
 Question ID : 292995496
 Option 1 ID : 2929951984
 Option 2 ID : 2929951981
 Option 3 ID : 2929951983
 Option 4 ID : 2929951982
 Status : Answered
 Chosen Option : 2

Q.5 For the formation of 80 male gametes how many pollen mother cells are required ?
 9

- Ans
- 1. 15
 - 2. 20
 - 3. 10
 - 4. 5

Question Type : MCQ
 Question ID : 292995422
 Option 1 ID : 2929951687
 Option 2 ID : 2929951688
 Option 3 ID : 2929951686
 Option 4 ID : 2929951685
 Status : Answered
 Chosen Option : 2

Q.6
 0 In the given diagram 'X' stands for _____.



- Ans
- 1. Mucosa which absorbs nutrients from digested food
 - 2. Lacteal which absorbs fatty acids and glycerol
 - 3. Blood vessel which absorbs digested food
 - 4. Lacteal which absorbs glucose and amino acids

Question Type : MCQ
 Question ID : 292995470

Option 1 ID : 2929951880
Option 2 ID : 2929951878
Option 3 ID : 2929951877
Option 4 ID : 2929951879
Status : Answered
Chosen Option : 3

Q.6 Which of the following are also called as polymorphs?

1

- Ans 1. Neutrophils
 2. Lymphocytes
 3. Basophils
 4. Macrophages

Question Type : MCQ
Question ID : 292995458
Option 1 ID : 2929951830
Option 2 ID : 2929951831
Option 3 ID : 2929951829
Option 4 ID : 2929951832
Status : Answered
Chosen Option : 1

Q.6 Kidneys do not carry out the function of ...

2

- Ans 1. Urea formation
 2. Osmoregulation
 3. Natriuresis
 4. Excretion

Question Type : MCQ
Question ID : 292995469
Option 1 ID : 2929951873
Option 2 ID : 2929951876
Option 3 ID : 2929951875
Option 4 ID : 2929951874
Status : Answered
Chosen Option : 3

Q.6 Which one of the following is a rich source of cytokinins?

3

- Ans 1. Butter milk
 2. Peanut milk
 3. Coconut milk
 4. Grape juice

Question Type : MCQ
Question ID : 292995424
Option 1 ID : 2929951693
Option 2 ID : 2929951695
Option 3 ID : 2929951694
Option 4 ID : 2929951696
Status : Answered
Chosen Option : 2

Q.6 The development of male gametophyte from a pollen mother cell showsdivisions.

4

- Ans 1. one meiotic & two mitotic
 2. two meiotic & two mitotic
 3. one meiotic & one mitotic
 4. one meiotic & three mitotic

Question Type : MCQ
Question ID : 292995426
Option 1 ID : 2929951702
Option 2 ID : 2929951704
Option 3 ID : 2929951701
Option 4 ID : 2929951703
Status : Answered
Chosen Option : 4

Q.6 Ascaris needshost/s for completion of its life cycle.

5

- Ans 1. one
 2. three
 3. two
 4. four

Question Type : MCQ
Question ID : 292995472
Option 1 ID : 2929951885
Option 2 ID : 2929951887
Option 3 ID : 2929951886
Option 4 ID : 2929951888
Status : Answered
Chosen Option : 1

Q.6 Each nerve is surrounded by thick sheath of a connective tissue called _____

6

- Ans 1. epineurium
 2. perichondrium
 3. Perineurium
 4. endoneurium

Question Type : MCQ
Question ID : 292995497
Option 1 ID : 2929951986
Option 2 ID : 2929951987
Option 3 ID : 2929951985
Option 4 ID : 2929951988
Status : Answered
Chosen Option : 4

Q.6 During fertilization, entry of the sperm into secondary oocyte stimulates all of the following

7 events EXCEPT.....

- Ans 1. Completion of meiosis-II

- 2. Formation of vitelline membrane
- 3. Release of second polar body
- 4. Introduction of centrioles in the secondary oocyte

Question Type : MCQ
Question ID : 292995467
Option 1 ID : 2929951865
Option 2 ID : 2929951868
Option 3 ID : 2929951867
Option 4 ID : 2929951866
Status : Answered
Chosen Option : 1

Q.6 Read the following statements and select the one which explains " Factors" with reference to environment.

- Ans
- 1. A particular place where organisms live
 - 2. Environmental complex
 - 3. External forces, substances or conditions, which can affect the living organism in one or the other way .
 - 4. Organisms which not merely occupy the place but also specify functional role in the community

Question Type : MCQ
Question ID : 292995425
Option 1 ID : 2929951697
Option 2 ID : 2929951699
Option 3 ID : 2929951698
Option 4 ID : 2929951700
Status : Answered
Chosen Option : 4

Q.6 At the end of oogenesis, ...polar bodies are formed.

- Ans
- 1. Three
 - 2. Two
 - 3. One
 - 4. Four

Question Type : MCQ
Question ID : 292995461
Option 1 ID : 2929951843
Option 2 ID : 2929951842
Option 3 ID : 2929951841
Option 4 ID : 2929951844
Status : Answered
Chosen Option : 3

Q.7 Identify the INCORRECT match

- Ans
- 1. Scrubber - Agricultural waste
 - 2. Fish management -Water pollution
 - 3. Land fillings - Radioactive wastes
 - 4. Electrodialysis- Water purification

Question Type : MCQ
Question ID : 292995487
Option 1 ID : 2929951948
Option 2 ID : 2929951947
Option 3 ID : 2929951946
Option 4 ID : 2929951945
Status : Answered
Chosen Option : 1

Q.7 The association of *Rhizobium* with root nodules in leguminous plants is called..

1

- Ans
- 1. Commensalism
 - 2. Mutualism
 - 3. Predation
 - 4. Parasitism

Question Type : MCQ
Question ID : 292995443
Option 1 ID : 2929951769
Option 2 ID : 2929951770
Option 3 ID : 2929951772
Option 4 ID : 2929951771
Status : Answered
Chosen Option : 4

Q.7 The first vaccine was produced in an attempt to provide protection against...

2

- Ans
- 1. Small pox
 - 2. Tuberculosis
 - 3. Polio
 - 4. Chicken pox

Question Type : MCQ
Question ID : 292995455
Option 1 ID : 2929951818
Option 2 ID : 2929951817
Option 3 ID : 2929951819
Option 4 ID : 2929951820
Status : Answered
Chosen Option : 4

Q.7 Antigen binding site (Paratope) of an antibody is present in ..

3

- Ans
- 1. Variable region of light chain
 - 2. Variable region of both heavy and light chain
 - 3. Variable region of heavy chain
 - 4. Constant region of both light and heavy chain

Question Type : MCQ
Question ID : 292995481
Option 1 ID : 2929951923
Option 2 ID : 2929951922

Option 3 ID : 2929951921
Option 4 ID : 2929951924
Status : Answered
Chosen Option : 4

Q.7 A tall, axial flower bearing pea plant can have how many different genotypes?
4

- Ans
- 1. Three
 - 2. Two
 - 3. Four
 - 4. One

Question Type : MCQ
Question ID : 292995427
Option 1 ID : 2929951707
Option 2 ID : 2929951706
Option 3 ID : 2929951708
Option 4 ID : 2929951705
Status : Answered
Chosen Option : 3

Q.7 The hormone melatonin is concerned with ...
5

- Ans
- 1. Homeostasis
 - 2. Metabolism
 - 3. Biological rhythm
 - 4. Muscle tone

Question Type : MCQ
Question ID : 292995454
Option 1 ID : 2929951815
Option 2 ID : 2929951813
Option 3 ID : 2929951816
Option 4 ID : 2929951814
Status : Answered
Chosen Option : 3

Q.7 Which of the following pairs shows heterogametes?
6

- Ans
- 1. Human male and Avian Male
 - 2. Female banded krait and human female
 - 3. Male banded krait and human female
 - 4. Human male and avian female

Question Type : MCQ
Question ID : 292995474
Option 1 ID : 2929951896
Option 2 ID : 2929951893
Option 3 ID : 2929951895
Option 4 ID : 2929951894
Status : Answered
Chosen Option : 4

Q.7 The respiratory and the food passages cross each other in the ...
7

- Ans
- 1. Sensory part of nasal chamber
 - 2. Naso Pharynx
 - 3. Oro-Pharynx
 - 4. Pharynx

Question Type : MCQ
Question ID : 292995475
Option 1 ID : 2929951899
Option 2 ID : 2929951898
Option 3 ID : 2929951897
Option 4 ID : 2929951900
Status : Answered
Chosen Option : 3

Q.7 Emasculation is done in flowers before anthesis to prevent _____.
8

- Ans
- 1. hybridization
 - 2. autogamy
 - 3. allogamy
 - 4. xenogamy

Question Type : MCQ
Question ID : 292995418
Option 1 ID : 2929951672
Option 2 ID : 2929951669
Option 3 ID : 2929951670
Option 4 ID : 2929951671
Status : Answered
Chosen Option : 2

Q.7 The enzyme useful in gene amplification in PCR is
9

- Ans
- 1. Endolysin
 - 2. Taq polymerase
 - 3. Alkaline phosphatase
 - 4. Transposase

Question Type : MCQ
Question ID : 292995437
Option 1 ID : 2929951747
Option 2 ID : 2929951745
Option 3 ID : 2929951748
Option 4 ID : 2929951746
Status : Answered
Chosen Option : 2

Q.8 Epigeal Germination is seen in
0

- Ans
- 1. Mango
 - 2. Tamarind

3. Groundnut

4. Pea

Question Type : MCQ

Question ID : 292995428

Option 1 ID : 2929951710

Option 2 ID : 2929951712

Option 3 ID : 2929951709

Option 4 ID : 2929951711

Status : Answered

Chosen Option : 4

Q.8 Find out the wrongly matched pair.

1

Ans 1. Protogyny-*Pisum sativum*

2. Protandry-sunflower

3. Self sterility-orchids

4. Unisexuality -castor

Question Type : MCQ

Question ID : 292995446

Option 1 ID : 2929951783

Option 2 ID : 2929951782

Option 3 ID : 2929951781

Option 4 ID : 2929951784

Status : Answered

Chosen Option : 1

Q.8 Pneumotoxic centre is located in the...

2

Ans 1. Pons

2. Cerebrum

3. Cerebellum

4. Medulla oblongata

Question Type : MCQ

Question ID : 292995460

Option 1 ID : 2929951837

Option 2 ID : 2929951839

Option 3 ID : 2929951838

Option 4 ID : 2929951840

Status : Answered

Chosen Option : 2

Q.8 Which substance out of following decrease the heart rate ?

3

Ans 1. Adrenaline

2. Erythropoietin

3. Caffeine

4. Acetylcholine

Question Type : MCQ

Question ID : 292995490

Option 1 ID : 2929951957
Option 2 ID : 2929951958
Option 3 ID : 2929951960
Option 4 ID : 2929951959
Status : Answered
Chosen Option : 4

Q.8
4 Match the following pairs & choose correct option

	Column I		Column II
a	Sulphur	1	Constituent of phospholipid
b	Phosphorus	2	Constituent of cell wall
c	Calcium	3	Constituent of ferredoxin
d	Iron	4	Constituent of methionine

- Ans
- 1. a-1, b-4, c-3, d-2
 - 2. a-4, b-1, c-2, d-3
 - 3. a-3, b-2, c-4, d-1
 - 4. a-4, b-3, c-1, d-2

Question Type : MCQ
Question ID : 292995413
Option 1 ID : 2929951651
Option 2 ID : 2929951652
Option 3 ID : 2929951650
Option 4 ID : 2929951649
Status : Answered
Chosen Option : 2

Q.8 Modification like winged seeds, pappus calyx, hooks of seedcoat, sticky substances on seeds
5 are meant for seed...

- Ans
- 1. dormancy
 - 2. dispersal
 - 3. viability
 - 4. protection

Question Type : MCQ
Question ID : 292995402
Option 1 ID : 2929951606
Option 2 ID : 2929951608
Option 3 ID : 2929951607
Option 4 ID : 2929951605
Status : Answered
Chosen Option : 1

Q.8 The number of codons in genetic dictionary is 64 as ..
6

- Ans
- 1. genetic code is triplet in nature
 - 2. the number of t-RNA is 64
 - 3. there are 64 amino acids to be coded
 - 4. there are three nonsense codons

Question Type : MCQ
Question ID : 292995405
Option 1 ID : 2929951618

Option 2 ID : 2929951619
Option 3 ID : 2929951617
Option 4 ID : 2929951620
Status : Answered
Chosen Option : 1

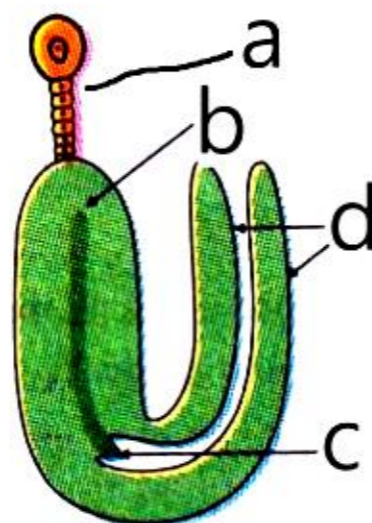
Q.8 In kidney, about 7 to 8 collecting ducts of nephron join to form
7

- Ans
- 1. Ureter
 - 2. Major calyx
 - 3. Duct of Bertini
 - 4. Duct of Bellini

Question Type : MCQ
Question ID : 292995493
Option 1 ID : 2929951971
Option 2 ID : 2929951969
Option 3 ID : 2929951972
Option 4 ID : 2929951970
Status : Answered
Chosen Option : 1

Q.8
8

Choose the correct set of labellings for the given figure



- Ans
- 1. a-Suspensor, b-Plumule, c-Radicle, d-Cotyledons
 - 2. a-Radicle, b-Suspensor, c-Plumule, d-Cotyledons
 - 3. a-Radicle, b-Plumule, c-Suspensor, d-Cotyledons
 - 4. a-Suspensor, b-Radicle, C-Plumule, d-Cotyledons

Question Type : MCQ
Question ID : 292995434
Option 1 ID : 2929951734

Option 2 ID : 2929951735
Option 3 ID : 2929951733
Option 4 ID : 2929951736
Status : Answered
Chosen Option : 1

Q.8 Which one of the following diseases is related to Adrenal gland ?

9

- Ans
- 1. Acromegaly
 - 2. Goitre
 - 3. Myxoedema
 - 4. Cushing's disease

Question Type : MCQ
Question ID : 292995456
Option 1 ID : 2929951822
Option 2 ID : 2929951824
Option 3 ID : 2929951821
Option 4 ID : 2929951823
Status : Answered
Chosen Option : 1

Q.9 In the symplast pathway water travels from cell to cell through....

0

- Ans
- 1. Casperian strips
 - 2. Plasmodesmata
 - 3. Inter cellular spaces
 - 4. Cellulosic cell wall

Question Type : MCQ
Question ID : 292995420
Option 1 ID : 2929951678
Option 2 ID : 2929951677
Option 3 ID : 2929951679
Option 4 ID : 2929951680
Status : Answered
Chosen Option : 2

Q.9 In rDNA technology the recombinant DNA is also called

1

- Ans
- 1. Cosmid
 - 2. Plasmid
 - 3. Chimeric DNA
 - 4. Phage DNA

Question Type : MCQ
Question ID : 292995421
Option 1 ID : 2929951681
Option 2 ID : 2929951682
Option 3 ID : 2929951683
Option 4 ID : 2929951684
Status : Answered
Chosen Option : 2

Q.9 The correct sequence of cytochromes as per their involvement in ETS of respiration is...

2

Ans 1.

Cyto.a → Cyto.b → Cyto.c₁ → Cyto.c → Cyto.a₃

2.

Cyto.a₃ → Cyto.a → Cyto.b → Cyto.c₁ → Cyto.c

3.

Cyto.b → Cyto.c₁ → Cyto.c → Cyto.a → Cyto.a₃

4.

Cyto.a → Cyto.c₁ → Cyto.b → Cyto.c → Cyto.a₃

Question Type : MCQ

Question ID : 292995433

Option 1 ID : 2929951731

Option 2 ID : 2929951732

Option 3 ID : 2929951729

Option 4 ID : 2929951730

Status : Answered

Chosen Option : 4

Q.9 Which animal accompanies shark without getting attached to obtain food?

3

Ans 1. Flea

2. Sucker fish

3. Pilot fish

4. Sea Anemone

Question Type : MCQ

Question ID : 292995468

Option 1 ID : 2929951869

Option 2 ID : 2929951872

Option 3 ID : 2929951870

Option 4 ID : 2929951871

Status : Answered

Chosen Option : 1

Q.9 Which of the following is NOT a process of Hershey-Chase experiment ?

4

Ans 1. Blending

2. Infection

3. Test tube assay

4. Centrifugation

Question Type : MCQ

Question ID : 292995432

Option 1 ID : 2929951727

Option 2 ID : 2929951726

Option 3 ID : 2929951728

Option 4 ID : 2929951725

Status : Answered

Chosen Option : 3

Q.9 Modern man belongs to group
5

- Ans
- 1. Pongidae
 - 2. Hominidae
 - 3. Prossimi
 - 4. Hyalobatidae

Question Type : MCQ
Question ID : 292995478
Option 1 ID : 2929951909
Option 2 ID : 2929951911
Option 3 ID : 2929951912
Option 4 ID : 2929951910
Status : Answered
Chosen Option : 2

Q.9 Endoplasmic reticulum is a continuous system connecting at one end to nuclear membrane &
6 the other end with ...

- Ans
- 1. Plasma membrane
 - 2. Vacuole
 - 3. Golgi complex
 - 4. Lysosome

Question Type : MCQ
Question ID : 292995498
Option 1 ID : 2929951989
Option 2 ID : 2929951992
Option 3 ID : 2929951990
Option 4 ID : 2929951991
Status : Answered
Chosen Option : 3

Q.9 Darwin's finches on Galapagos island is the example of ...
7

- Ans
- 1. Genetic drift
 - 2. Industrial melanism
 - 3. Reproductive isolation
 - 4. Geographical isolation

Question Type : MCQ
Question ID : 292995457
Option 1 ID : 2929951826
Option 2 ID : 2929951827
Option 3 ID : 2929951828
Option 4 ID : 2929951825
Status : Answered
Chosen Option : 1

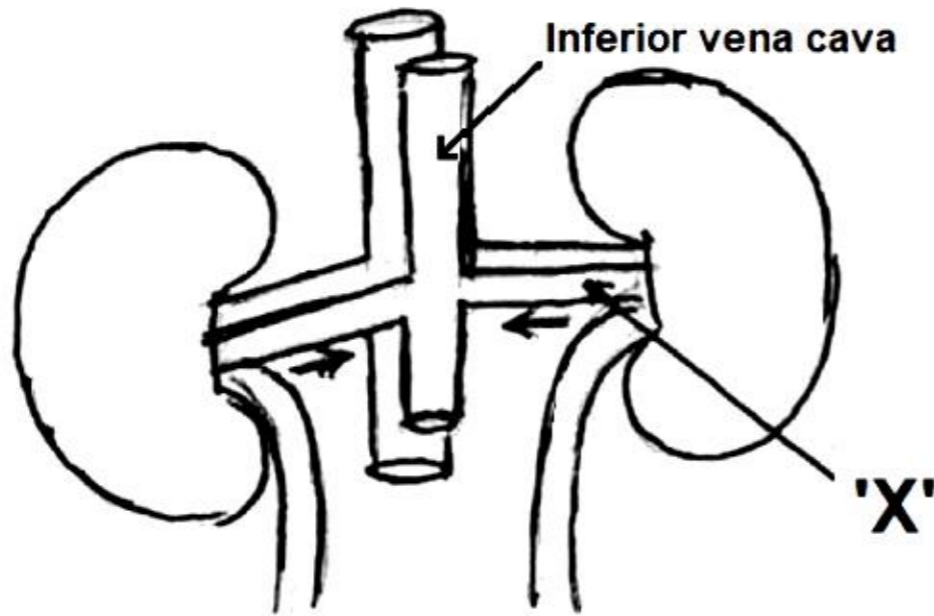
Q.9 Crawler is a stage in life cycle of ...
8

- Ans
- 1. Lac insect

- 2. Silk moth
- 3. Honey bee
- 4. Fish

Question Type : MCQ
 Question ID : 292995476
 Option 1 ID : 2929951903
 Option 2 ID : 2929951901
 Option 3 ID : 2929951902
 Option 4 ID : 2929951904
 Status : Answered
 Chosen Option : 1

Q.9
 9 In the given diagram 'X' is described as _____.



- Ans
- 1. Ureter-conducting the urine.
 - 2. Renal vein-conducting blood with minimum urea.
 - 3. Renal artery conducting blood with no urea.
 - 4. Renal artery -conducting blood with more urea.

Question Type : MCQ
 Question ID : 292995463
 Option 1 ID : 2929951852
 Option 2 ID : 2929951850
 Option 3 ID : 2929951849
 Option 4 ID : 2929951851
 Status : Answered
 Chosen Option : 3

Q.1 Which of the following set of tissues is exclusively mesodermal in origin ?
 00

- Ans
- 1. Connective and Muscular
 - 2. Nervous and Connective
 - 3. Connective and Epithelial
 - 4. Epithelial and Nervous

Question Type : MCQ
 Question ID : 292995451
 Option 1 ID : 2929951804

Option 2 ID : 2929951802

Option 3 ID : 2929951803

Option 4 ID : 2929951801

Status : **Answered**

Chosen Option : 1