# Question Paper Preview

**Question Paper Name:** Computer Science and Engineering

**Subject Name:** Computer Science and Engineering

Mathematics

Number of Questions: 50

Display Number Panel: Yes

Group All Questions: No

**Question Number : 1  Question Id : 6780944804  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If the traces of A and B are 20 and -8 then the trace of (A+B) is ___

**Options :**

1. 12

2. -12

3. 28

4. -28

**Question Number : 2  Question Id : 6780944805  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $A = \begin{bmatrix} x & 1 \\ 1 & 0 \end{bmatrix}$ is an involutory matrix then $x=$

**Options :**

1. 0

2. $-2$

3. $-1$

4. 2

**Question Number : 3  Question Id : 6780944806  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The determinant of $\begin{bmatrix} \log e & \log e^2 & \log e^3 \\ \log e^2 & \log e^3 & \log e^4 \\ \log e^3 & \log e^4 & \log e^5 \end{bmatrix}$ is ___

**Options :**

1. 0

2. 1

3. $4 \log e$

4. $5 \log e$

**Question Number : 4  Question Id : 6780944807  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $A = \begin{bmatrix} 1 & 1 & 0 \\ 2 & 1 & 3 \\ 0 & 1 & 2 \end{bmatrix}$ then $\det(adjA) =$ ___

**Options :**

1. $\det A$

2. $\det A^2$

3. $-\det A$

4. $(\det A)^2$

**Question Number : 5  Question Id : 6780944808  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $A$, $B$ are two matrices and $AB=B$, $BA=A$ then $A^2 + B^2 =$

**Options :**

1. $A+B$

2. $A-B$

3. $AB$

4. $0$

**Question Number : 6  Question Id : 6780944809  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $\dfrac{3x+2}{(x+1)(2x^2+3)} = \dfrac{A}{x+1} + \dfrac{Bx+C}{2x^2+3}$, then $A+C-B = $ ___

**Options :**

1. 0

2. 2

3. 3

4. 5

**Question Number : 7  Question Id : 6780944810  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $\dfrac{3x}{(x-a)(x-b)} = \dfrac{2}{x-a} + \dfrac{1}{x-b}$ then $a:b = $ ___

**Options :**

1. $-2:1$

2. $2:1$

3. $1:2$

4. $3:1$

**Question Number : 8  Question Id : 6780944811  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The value of $\tan 855° = $ ___

**Options :**

1. $1$

2. $\dfrac{1}{\sqrt{2}}$

3. $-1$

4. $-\dfrac{1}{\sqrt{2}}$

**Question Number : 9  Question Id : 6780944812  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $\tan\alpha = \dfrac{m}{m+1}$ and $\tan\beta = \dfrac{1}{2m+1}$ then $\tan(\alpha+\beta) = $ ___

**Options :**

1. $-1$

2. $0$

3. $1$

4. $2$

**Question Number : 10  Question Id : 6780944813  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The value of $6\sin 20° - 8\sin^3 20° =$

**Options :**

1. $2$

2. $\dfrac{1}{\sqrt{2}}$

3. $\sqrt{3}$

4. $\dfrac{1}{\sqrt{3}}$

**Question Number : 11  Question Id : 6780944814  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $3\sin\theta + 4\cos\theta = 5$ then the value of $4\sin\theta - 3\cos\theta =$

**Options :**

1. $0$

2. $-1$

3. $1$

4. $2$

**Question Number : 12  Question Id : 6780944815  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The sine function with period 3 is

**Options :**

1. $\sin\dfrac{2\pi x}{3}$

2. $\sin\dfrac{\pi x}{3}$

3. $\sin 3\pi x$

4. $\sin \dfrac{3\pi x}{2}$

**Question Number : 13  Question Id : 6780944816  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The maximum value of $3\sin^2 x + 5\cos^2 x$ is ____

**Options :**

1. 8

2. 3

3. 5

4. 34

**Question Number : 14  Question Id : 6780944817  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The equation $\sqrt{3}\sin x + \cos x = 4$ has ____

**Options :**

1. Only one solution

2. two solutions

3. Infinite solutions

4. no solution

**Question Number : 15  Question Id : 6780944818  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The solution of $\mathrm{Cos}^{-1}\left(\sqrt{3}x\right) + \mathrm{Cos}^{-1} x = \dfrac{\pi}{2}$ is ____

**Options :**

1. $\dfrac{1}{2}$

2. $\dfrac{1}{5}$

3. $-\dfrac{1}{2}$

4. $-\dfrac{1}{5}$

**Question Number : 16  Question Id : 6780944819  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The value of $\sin\theta + \sin(\theta + 120°) - \sin(120° - \theta) = $ _____

**Options :**

1. $0$

2. $\sin\theta$

3. $1$

4. $-\sin\theta$

**Question Number : 17  Question Id : 6780944820  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The principal solution of $3\,\text{Cosec}A = 4\,\text{Sin}A$ is _____

**Options :**

1. $\dfrac{\pi}{4}$

2. $\pm\dfrac{\pi}{3}$

3. $\pm\dfrac{\pi}{6}$

4. $\pm 2\pi$

**Question Number : 18  Question Id : 6780944821  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $\left|z^2 - 1\right| = |z|^2 + 1$, then $z$ lies in _____

**Options :**

1. The real axis

2. a circle

3. The imaginary axis

4. a parabola

**Question Number : 19  Question Id : 6780944822  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $\left(\dfrac{1+i}{1-i}\right)^3 - \left(\dfrac{1-i}{1+i}\right)^3 = a+ib$, then $a$ an $b$ are _____

**Options :**

1. 1,1

2. 2,-2

3. 0,-2

4. 0,-1

**Question Number : 20  Question Id : 6780944823  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If the line $y = 2x + c$ is a tangent to $x^2 + y^2 = 5$ then the value of $c$ is _____

**Options :**

1. 2

2. 3

3. 4

4. 5

**Question Number : 21  Question Id : 6780944824  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The vertex of the parabola $x^2 + 8x + 12y + 4 = 0$ is

**Options :**

1. $(-4,1)$

2. $(4,-1)$

3. $(-4,-1)$

4. $(4,1)$

**Question Number : 22  Question Id : 6780944825  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The number of tangents to the ellipse $\dfrac{x^2}{4} + \dfrac{y^2}{2} = 1$ through $(2,1)$ is _____

**Options :**

1. 0

2. 1

3. 2

4. 3

**Question Number : 23  Question Id : 6780944826  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The length of the latus rectum of the hyperbola $x^2 - 4y^2 = 4$ is _____

**Options :**

1. 2

2. 1

3. 4

4. 3

**Question Number : 24  Question Id : 6780944827  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The length of the diameter of the  circle $x^2 + y^2 - 6x - 8y = 0$ is _____

**Options :**

1. 10

2. 15

3. 5

4. 20

**Question Number : 25  Question Id : 6780944828  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If the line $2y = 5x + k$ touches the parabola $y^2 = 6x$ then $k=$ ___

**Options :**

1. $\dfrac{2}{3}$

2. $\dfrac{4}{3}$

3. $\dfrac{3}{5}$

4. $\dfrac{6}{5}$

$$\lim_{x \to 2+} \frac{x|x-2|}{x-2} = \underline{\qquad}$$

**Options :**

1. $1$

2. $-1$

3. $2$

4. $-2$

If $f(x) = (1+x)^{\frac{2}{x}}$ is continuous at $x = 0$ then $f(0) = \underline{\qquad}$

**Options :**

1. $e$

2. $e^2$

3. $e^3$

4. $e^4$

If $x = a\sec\theta, y = b\tan\theta$ then $\frac{dy}{dx} = \underline{\qquad}$

**Options :**

1. $\frac{b}{a}\sec\theta$

2. $\frac{b}{a}\csc\theta$

3. $\frac{a}{b}\sec\theta$

4. $\frac{a}{b}\csc\theta$

**Question Number : 29 Question Id : 6780944832 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

If $x^y = e^{x-y}$ then $\dfrac{dy}{dx} = $ _____

**Options :**

1.  $\dfrac{\log x}{(1+\log x)^2}$

2.  $\dfrac{\log x}{(1-\log x)^2}$

3.  $\dfrac{-\log x}{(1+\log x)^2}$

4.  $\dfrac{-1}{(1+\log x)^2}$

**Question Number : 30 Question Id : 6780944833 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

If $y = \sin^{-1}\left(\dfrac{x}{\sqrt{1+x^2}}\right)$ then $\dfrac{dy}{dx} = $ _____

**Options :**

1.  $-\dfrac{1}{1+x^2}$

2.  $\dfrac{1}{1+x^2}$

3.  $\dfrac{2}{1+x^2}$

4.  $-\dfrac{2}{1+x^2}$

**Question Number : 31 Question Id : 6780944834 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The slope of the normal to the curve $x = a\sec\theta, y = a\tan\theta$ at $\theta = \dfrac{\pi}{6}$ is _____

**Options :**

1. 2

2. 0

3. $-\dfrac{1}{2}$

4. 1

**Question Number : 32  Question Id : 6780944835  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The rate of change of area of a circle with respect to radius when *r*=5cm is

**Options :**

1. $2\pi$ sq.cm/sec

2. $10\pi$ sq.cm/sec

3. $100\pi$ sq.cm/sec

4. $20\pi$ sq.cm/sec

**Question Number : 33  Question Id : 6780944836  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following function has maxima or minima?

**Options :**

1. $e^x$

2. $\log x$

3. $x^3 + x^2 + x + 1$

4. $\sin x$

**Question Number : 34  Question Id : 6780944837  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If the increase in the side of a square is 2% then the approximate percentage increase in the area of the square is _____

**Options :**

1. 2

2. 4

3. 6

4. 8

**Question Number : 35  Question Id : 6780944838  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

For the function $f(x) = \log(x^2 + y^2)$, which of the following is true?

**Options :**

1. $f_x + f_y = 0$

2. $f_{xx} + f_{yy} = 0$

3. $f_x - f_y = 0$

4. $f_{xx} - f_{yy} = 0$

**Question Number : 36  Question Id : 6780944839  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$\int \operatorname{cosec}^5 \theta \cot \theta \, d\theta = \underline{\quad\quad}$

**Options :**

1. $\dfrac{\cot^2 \theta}{2}$

2. $\dfrac{-\operatorname{cosec}^5 \theta}{5}$

3. $\dfrac{\operatorname{cosec}^6 \theta}{6}$

4. $\dfrac{-\operatorname{cosec}^6 \theta}{6}$

**Question Number : 37  Question Id : 6780944840  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$\int_{2}^{3} \dfrac{dx}{x^2 - x} = \underline{\quad\quad}$

**Options :**

1. $\log \dfrac{2}{3}$

2. $\log \dfrac{4}{3}$

3. $\log \dfrac{8}{3}$

4. $\log \dfrac{1}{4}$

**Question Number : 38  Question Id : 6780944841  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If $a < 0 < b$ then $\displaystyle\int_{a}^{b} \dfrac{|x|}{x} dx = $ _____

**Options :**

1. $b - a$

2. $a - b$

3. $a + b$

4. $0$

**Question Number : 39  Question Id : 6780944842  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$\displaystyle\int_{0}^{1} x \tan^{-1} x \, dx = $ _____

**Options :**

1. $\dfrac{\pi}{4} - \dfrac{1}{2}$

2. $\dfrac{\pi}{8} - \dfrac{1}{2}$

3. $\dfrac{\pi}{4} + \dfrac{1}{2}$

4. $\dfrac{\pi}{8} + \dfrac{1}{2}$

**Question Number : 40  Question Id : 6780944843  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$\displaystyle\lim_{n \to \infty} \sum_{r=1}^{n} \dfrac{1}{n} e^{\frac{r}{n}} = $ _____

**Options :**

1. $e$

2. $(1+e)$

3. $(1-e)$

4. $(e-1)$

**Question Number : 41  Question Id : 6780944844  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$$\int_0^{\pi/4} \sec^6 x\, dx = \underline{\hspace{2cm}}$$

**Options :**

1. $\dfrac{8}{3}$

2. $\dfrac{28}{15}$

3. $-\dfrac{28}{15}$

4. $\dfrac{4}{5}$

**Question Number : 42  Question Id : 6780944845  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The area bounded by the curve $y = \log x$. x-axis and the straight line $x - e = 0$ is _____square units

**Options :**

1. $e$

2. $(e-1)$

3. $0$

4. $(1-e)$

**Question Number : 43  Question Id : 6780944846  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The volume of the solid generated by rotating one arch of the curve $y = Sin3x$ about the x-axis is----

**Options :**

1. $\pi^2$

2. $\dfrac{\pi^2}{2}$

3. $\dfrac{\pi^2}{4}$

4. $\dfrac{\pi^2}{6}$

**Question Number : 44  Question Id : 6780944847  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

$y = cx - c^2$ is the general solution of the differential equation

**Options :**

1. $\left(\dfrac{dy}{dx}\right)^2 - x\left(\dfrac{dy}{dx}\right) + y = 0$

2. $\dfrac{d^2 y}{dx^2} = 0$

3. $\dfrac{dy}{dx} = c$

4. $\left(\dfrac{dy}{dx}\right)^2 + x\left(\dfrac{dy}{dx}\right) + y = 0$

**Question Number : 45  Question Id : 6780944848  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The general solution of the differential equation $\dfrac{dy}{dx} + \dfrac{y}{3} = 1$ is

**Options :**

1. $y = 3 + ce^{\frac{x}{3}}$

2. $y = 3 + ce^{-\frac{x}{3}}$

3. $3y = c + e^{\frac{x}{3}}$

4. $3y = c + e^{-\frac{x}{3}}$

**Question Number : 46  Question Id : 6780944849  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The differential equation corresponding to the family of curves $y = ae^{bx}$, where $a$ and $b$ are arbitrary constants, is _____

**Options :**

1. $\dfrac{d^2y}{dx^2} = y\dfrac{dy}{dx}$

2. $y\dfrac{d^2y}{dx^2} - \dfrac{dy}{dx} = 0$

3. $y\dfrac{d^2y}{dx^2} = \left(\dfrac{dy}{dx}\right)^2$

4. $\dfrac{dy}{dx} - y^2 = 0$

**Question Number : 47  Question Id : 6780944850  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

An integrating factor of the differential equation
$(x^2y + y + 1)dx + (x + x^3)dy = 0$ is ___

**Options :**

1. $e^x$

2. $x^2$

3. $\dfrac{1}{x}$

4. $x$

**Question Number : 48  Question Id : 6780944851  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The differential equation whose solution is $Ax^2 + By^2$, where A,B are arbitrary constants are of ----

**Options :**

1. $1^{st}$ order and $1^{st}$ degree

2. $2^{nd}$ order and $1^{st}$ degree

3. $2^{nd}$ order and $2^{nd}$ degree

4. $1^{st}$ order and $2^{nd}$ degree

**Question Number : 49 Question Id : 6780944852 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The general solution of the differential equation $\dfrac{d^2x}{dt^2} - 4\dfrac{dx}{dt} + 5x = 0$ is

**Options :**

1. $x = (c_1 \cos t + c_2 \sin t)e^{2t}$

2. $t = (c_1 \cos x + c_2 \sin x)e^{2x}$

3. $x = (c_1 \cos 2t + c_2 \sin 2t)e^{t}$

4. $t = (c_1 \cos 2x + c_2 \sin 2x)e^{x}$

**Question Number : 50 Question Id : 6780944853 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The particular integral of $(D-2)^2 y = \sin 2x$ is

**Options :**

1. $\dfrac{\cos 2x}{8}$

2. $\dfrac{\sin 2x}{8}$

3. $\dfrac{-\cos 2x}{2}$

4. $\dfrac{-\sin 2x}{2}$

|  | Physics |
| --- | --- |
| Number of Questions: | 25 |
| Display Number Panel: | Yes |
| Group All Questions: | No |

**Question Number : 51 Question Id : 6780944854 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The unit of impulse is the same as that of

Options :

1. moment of force

2. linear momentum

3. force

4. pressure

**Question Number : 52 Question Id : 6780944855 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

If the force is given by $F = at + bt^2$ where t is the time. The dimensions of a and b are

Options :

1. $MLT^{-4}$, $MLT^{-2}$

2. $MLT^{-3}$, $MLT^{-4}$

3. $ML^2T^{-3}$, $ML^2T^{-2}$

4. $ML^2T^{-3}$, $ML^3T^{-4}$

**Question Number : 53 Question Id : 6780944856 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

Vector parallel to $6\hat{i} + 8\hat{j}$ and having a magnitude of 5 is

Options :

1. $4\hat{i} + 3\hat{j}$

2. $12\hat{i} + 16\hat{j}$

3. $16\hat{i} + 8\hat{j}$

4. $3\hat{i} + 4\hat{j}$

**Question Number : 54 Question Id : 6780944857 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

If $|\vec{A} \times \vec{B}| = K(AB)$ then angle between $\vec{A}$ and $\vec{B}$ is

Options :

1. $\cos^{-1}K$

2. $\cos^{-1}(1/K)$

3. $\sin^{-1}K$

4. $\sin^{-1}(1/K)$

**Question Number : 55  Question Id : 6780944858  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A cricket ball is thrown at a speed of 28 m/s in a direction $30^0$ above the horizontal. The maximum height reached by the ball is

**Options :**

1. 10 m

2. 20 m

3. 30 m

4. 40 m

**Question Number : 56  Question Id : 6780944859  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Two bodies are projected at angles of $45^0$ and $60^0$ with the horizontal with same velocity simultaneously. Ratio of their horizontal ranges is

**Options :**

1. $\sqrt{3}:2$

2. $2:\sqrt{3}$

3. $1:2$

4. $2:1$

**Question Number : 57  Question Id : 6780944860  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A ball thrown by a boy is caught 2 seconds later by another at some distance away on the same level. If the angle of projection is $30^0$, the velocity of projection is

**Options :**

1. 19.6 m/sec

2. 9.8 m/sec

3. 4.9 m/sec

4. 5.2 m/sec

**Question Number : 58  Question Id : 6780944861  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A 200 m wide river flows with a velocity of  5 m/sec. A man crosses the river in the shortest  time of 25 sec. If there is no flow and he swims with the same velocity, the time taken to cross the  river is

**Options :**

1. $\dfrac{200}{5\sqrt{3}}$ sec

2. 20 sec

3. 25 sec

4. $25\sqrt{2}$ sec

**Question Number : 59  Question Id : 6780944862  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A body of mass 1 Kg lies on an inclined plane of angle $60^0$ to the horizontal. If the   coefficient of friction is 0.4, the frictional force along the inclined plane is

**Options :**

1. 1.96 N

2. 0.98 N

3. 0.49 N

4. 0.245 N

**Question Number : 60  Question Id : 6780944863  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A force  of 20 Kg weight is required to just slide a wooden box weighing 50 Kg over ice. Then  coefficient of static friction between the surfaces in contact is

**Options :**

1. 0.2

2. 0.4

3. 0.8

4. 0.1

**Question Number : 61  Question Id : 6780944864  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A cyclist comes to a skidding stop in 10m. During this process, the force on the cycle due to the road is 200N and is directly opposed to the motion. The work done by the road on the cycle is

**Options :**

1. 1000 J

2. 2000J

3. -1000J

4. -2000J

**Question Number : 62  Question Id : 6780944865  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A sphere of mass 4 Kg is dropped from a certain height. After 5s, its kinetic energy is     $(g=10 \text{ m/s}^2)$

**Options :**

1. 5J

2. 50 J

3. 5 KJ

4. 50 KJ

**Question Number : 63  Question Id : 6780944866  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

An elevator weighing 500 kg is to be lifted up at a constant velocity of 0.20 m/s. What would be the minimum power of the motor to be used?

**Options :**

1. 100 W

2. 500 W

3. 980 W

4. 900 W

**Question Number : 64  Question Id : 6780944867  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

At t=0, the displacement of a particle in SHM is half its amplitude. Its initial phase is   (referring to mean position)

**Options :**

1. $\dfrac{\pi}{6}$

2. $\dfrac{\pi}{3}$

3. $\dfrac{2\pi}{3}$

4. $\dfrac{\pi}{2}$

**Question Number : 65  Question Id : 6780944868  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The length of seconds pendulum is 100 cm. To have a period half of this value, the length is  to  be reduced by

**Options :**

1. 25 cm

2. 75 cm

3. 50 cm

4. 100 cm

**Question Number : 66  Question Id : 6780944869  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Inside a big hall, the reverberation time is

**Options :**

1. directly proportional to volume

2. inversely proportional to sound absorption

both directly proportional to volume

and

inversely proportional to sound absorption

3.

depends on temperature

4.

**Question Number : 67  Question Id : 6780944870  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The voice of lion is different from that of a mosquito because

**Options :**

1. the sounds have different pitch

2. they are of different size

3. the two voices travel with different velocities

4. the sounds have different phases

**Question Number : 68  Question Id : 6780944871  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A car is travelling at $\frac{v}{10}$ m/s and sounds horn of frequency 990 Hz. The apparent frequency heard by a police chasing the car at $\frac{v}{9}$ m/s (v is the velocity of sound) is

**Options :**

1. 990 Hz

2. 900 Hz

3. 100 Hz

4. 1000Hz

**Question Number : 69  Question Id : 6780944872  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

When ice cube melts and becomes water, the ice-water system undergoes a change such that

**Options :**

1. entropy of the system decreases and internal energy decreases

2. entropy of the system decreases and internal energy increases

entropy of the system increases and internal energy increases

3.

entropy of the system increases and internal energy decreases

4.

A mass of 300 gm falls from a height of 3 m(g=9.8 m/s$^2$). Assuming that the whole energy is converted into heat,  the amount of heat produced is

**Options :**

1. 2 cal

2. 2.1 cal

3. 4 cal

4. 4.2 cal

During an adiabatic expansion of 2 moles of a gas, the change in internal energy was found to  be equal to 100 J. The work done during the process will be equal to

**Options :**

1. zero

2. -100 J

3. 200 J

4. 100 J

The pressure and density of a diatomic gas ( $\gamma = \frac{7}{5}$) change adiabatically from

(P,d) to (P$^1$,d$^1$).   If $\frac{d^1}{d}$ = 32, then $\frac{P^1}{P}$ is

**Options :**

1. 128

2. 32

3.  256

4.  64

**Question Number : 73  Question Id : 6780944876  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Boyle's law holds good for an ideal gas during

**Options :**

1.  isobaric changes

2.  isothermal changes

3.  isochoric changes

4.  isotopic changes

**Question Number : 74  Question Id : 6780944877  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The threshold frequency of metal is $v_0$. When a light of frequency $4 v_0$ is

incident on metal   then the $K.E_{max}$ of emitted electrons is

**Options :**

1.  $2 v_0 h$

2.  $3 v_0 h$

3.  $4 v_0 h$

4.  $v_0 h$

**Question Number : 75  Question Id : 6780944878  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Superconductors are _____ materials

**Options :**

1.  dielectric

2.  paramagnetic

3.  ferromagnetic

4.  diamagnetic

Number of Questions:                     25
Display Number Panel:              Yes
Group All Questions:                No

**Question Number : 76  Question Id : 6780944879  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The Pauli exclusion  principle is concerned with

**Options :**

1. Energy of orbital.

2. Spin of electron.

3. Energy of electron

4. Angular momentum of electron

**Question Number : 77  Question Id : 6780944880  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

According to Bohr's model of hydrogen atom, the following is quantized

**Options :**

1. Linear momentum

2. Linear velocity

3. Angular momentum

4. Angular velocity

**Question Number : 78  Question Id : 6780944881  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

How many 'd' – orbitals  have two perpendicular nodal planes

**Options :**

1. Two

2. Three

3. Four

4. Five

**Question Number : 79  Question Id : 6780944882  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In sodium chloride crystal, each $Na^+$ ion is surrounded by

Options :

1. Two $Cl^-$ ions

2. Four $Cl^-$ ions

3. Six $Cl^-$ ions

4. Eight $Cl^-$ ions

**Question Number : 80  Question Id : 6780944883  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which among the following molecule contains a $\pi$ – bond

Options :

1. $H_2$

2. $O_2$

3. $F_2$

4. $HCl$

**Question Number : 81  Question Id : 6780944884  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which among the following is insoluble in water?

Options :

1. Alcohol

2. Ammonia

3. Benzene

4. Acetone

**Question Number : 82  Question Id : 6780944885  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The normality of 2.3 M $H_2SO_4$ solution is

Options :

1. 0.46N

2. 0.23 N

3. 2.3 N

4. 4.6N

**Question Number : 83  Question Id : 6780944886  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

8 grams of substance of molecular weight 40 is dissolved in 250 g of water. Then the **molality** of the solution is

**Options :**

1. 0.4

2. 0.8

3. 0.2

4. 0.6

**Question Number : 84  Question Id : 6780944887  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The pH value of 0.05M $Ba(OH)_2$ solution is

**Options :**

1. 10

2. 12

3. 13

4. 11

**Question Number : 85  Question Id : 6780944888  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following molecule is not a Lewis Base?

**Options :**

1. $H_2O$

2. $BF_3$

3. $NH_3$

4. CO

**Question Number : 86  Question Id : 6780944889  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

During the electrolysis of brine, 710 g of $Cl_2$ was liberated at anode. The weight of NaOH formed

**Options :**

1. 800 g

2. 400 g

3. 80 g

4. 40 g

**Question Number : 87  Question Id : 6780944890  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In the Danniel cell, which electrode acts as anode?

**Options :**

1. Cu

2. Hg

3. Zn

4. Pt

**Question Number : 88  Question Id : 6780944891  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The molar conductance of HCl is more than that of NaCl because

**Options :**

1. NaCl is more polar than KCl

2. NaCl is ionic while HCl is covalent

3. Ionic mobility of $H^+$ is more than that of $Na^+$

4. $H^+$ get hydrated.

**Question Number : 89  Question Id : 6780944892  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The units for electrochemical equivalent are

**Options :**

1. grams

2. grams ampere

3. Coulomb

4. Grams per coulomb

**Question Number : 90  Question Id : 6780944893  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Zeolite softening process removes

**Options :**

1. Only permanent hardness of water

2. Only temporary hardness of water

3. Both temporary and permanent hardness of water

4. The dissolved gases in permanent hard water.

**Question Number : 91  Question Id : 6780944894  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The permanent hardness of water is caused by the presence of

**Options :**

1. Bicarbonates of Ca and Mg

2. Carbonates of Na and K

3. Chlorides and Sulphates of Ca and Mg.

4. Phosphates of Na and K

**Question Number : 92  Question Id : 6780944895  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The secondary treatment of water uses _____ to consume wastes in water.

**Options :**

1. Filtration

2. Sedimentation

3. Chemicals

4. Microorganisms

**Question Number : 93  Question Id : 6780944896  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Difficult to monitor and very dangerous form of corrosion is

**Options :**

1. Galvanic

2. Pitting

3. Crevice

4. Stress

When Pt and Co are electrically connected, which one gets corroded?

**Options :**

1. Co

2. Pt

3. None

4. both

What rubber was invented when Dr. Joseph C. Patrick tried to make antifreeze?

**Options :**

1. Methyl rubber

2. Chloroprene

3. Bruna N

4. Thiokol

The first plastic ever synthesized was called _____.

**Options :**

1. Bakelite

2. Nylon

3. Dacron

4. Cellulose

_____ is a brand of polyester textile fiber that is wrinkle resistant and strong

**Options :**

1. Cellulose

2. Dacron

3. Bakelite

4. Nylon

**Question Number : 98  Question Id : 6780944901  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Water gas is a mixture of

**Options :**

1. $H_2 + CO$

2. $N_2 + CO$

3. $H_2 + CO_2$

4. $H_2 + CH_4$

**Question Number : 99  Question Id : 6780944902  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not a greenhouse gas?

**Options :**

1. CO

2. $CO_2$

3. water vapour

4. $CH_4$

**Question Number : 100  Question Id : 6780944903  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Burning of fossil fuels causes

**Options :**

1. Global warming

2. Ozone depletion

3. Acid rain

4. Eutrophication

**Question Number : 101  Question Id : 6780944904  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following logic families uses bipolar transistors?

**Options :**

1. TTL

2. NMOS

3. CMOS

4. ECL

**Question Number : 102  Question Id : 6780944905  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The functional difference between SR flip flop and JK flip flop is that

**Options :**

1. JK flip flop is faster than SR flip flop

2. JK flip flop accepts both inputs

3. JK flip flop has a feedback path

4. JK flip flop does not require external choice

**Question Number : 103  Question Id : 6780944906  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following flip flop is free from race around condition?

**Options :**

1. SR flip flop

2. D flip flop

3. T flip flop

4. Master-Slave flip flop

**Question Number : 104  Question Id : 6780944907  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

How many control lines are required for 16 to 1 multiplexer?

**Options :**

1. 2

2. 4

3. 6

4. 8

**Question Number : 105  Question Id : 6780944908  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The octal equivalent value of hexadecimal value AB is

**Options :**

1. 253

2. 242

3. 221

4. 143

**Question Number : 106  Question Id : 6780944909  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A Boolean function may be transformed into

**Options :**

1. logical diagram

2. logical graph

3. map

4. matrix

**Question Number : 107  Question Id : 6780944910  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Full adder performs addition on

**Options :**

1. 2 bits

2. 3 bits

3. 4 bits

4. 5 bits

**Question Number : 108  Question Id : 6780944911  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The Boolean function A + BC is reduced representation of _____

Options :

1. AB + BC

2. (A+B)(A+C)

3. A'B+AB'C

4. (A+C)B

The instruction, MOV BX, 0008H belongs to the address mode

Options :

1. Register

2. Direct

3. Immediate

4. Register relative

The intel 8086 microprocessor is a _____ processor

Options :

1. 8 bit

2. 16 bit

3. 32 bit

4. 4 bit

Which of the following is not a data transfer/copy instruction?

Options :

1. PUSH

2. MOV

3. POP

4. DAS

**Question Number : 112  Question Id : 6780944915  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The 80286 is able to address the physical memory of

**Options :**

1. 8 MB

2. 16 MB

3. 24 MB

4. 64 MB

**Question Number : 113  Question Id : 6780944916  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The registers that contain the status information is

**Options :**

1. control registers

2. instruction registers

3. program status word

4. program counter

**Question Number : 114  Question Id : 6780944917  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The result of MOV AL, 65 is to store

**Options :**

1. store 0100 0010 in AL

2. store 42H in AL

3. store 40H in AL

4. store 0100 0001 in AL

**Question Number : 115  Question Id : 6780944918  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The address bits are sent out on lines through _____

**Options :**

1. A16-19

2. A10-17

3. D10-D17

4. B10-C17

**Question Number : 116   Question Id : 6780944919   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

The 8086 fetches instruction one after another from _____ of memory

**Options :**

1. Code segment

2. IP

3. ES

4. SS

**Question Number : 117   Question Id : 6780944920   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

The accumulator is 16 bit wide and is called:

**Options :**

1. AX

2. AH

3. AL

4. DL

**Question Number : 118   Question Id : 6780944921   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

Operating frequency of 80386 microprocessor is _____

**Options :**

1. 14 MHz  and  20 MHz

2. 20 MHz and  33 MHz

3. 35 MHz  and  45 MHz

4. 56 MHz  and 76 MHz

**Question Number : 119   Question Id : 6780944922   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

Reference that are available in the cache are called_____ :

**Options :**

1. Cache hits

2. Cache line

3. Cache memory

Cache miss

4.

The position of cache memory exists between

**Options :**

1. Main memory and secondary memory

2. CPU and Main memory

3. RAM and ROM

4. Inside the processor

Which of the following types of instructions will affect the stack pointer?

    I.   Call subroutine

    II.  Return

    III. Conditional branch

**Options :**

1. I & II

2. II & III

3. I & III

4. I, II & III

Hard disc is an example of _____ memory of the digital computer

**Options :**

1. Primary memory

2. Secondary memory

3. Main memory

4. Random Access memory

The 2's complement representation of the decimal number 7 is

**Options :**

1. 1010

2. 1001

3. 1100

   1110

4.

**Question Number : 124 Question Id : 6780944927 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The decimal value 0.25 is equivalent to

**Options :**

1. Binary 0.1

2. Binary 0.01

3. Binary 0.001

4. Binary 0.0001

**Question Number : 125 Question Id : 6780944928 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

The floating point representation is used to store

**Options :**

1. Boolean values

2. Whole numbers

3. Real integers

   Rational number

4.

**Question Number : 126 Question Id : 6780944929 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

Which of the following will not be there in a memory mapped I/O System?

**Options :**

1. LDA

2. IN

3. ADD

4. SUB

**Question Number : 127  Question Id : 6780944930  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In Computers the subtraction can be carried out by

**Options :**

1. 10's Complement

2. 9's Complement

3. 2's Complement

4. 1's Complement

**Question Number : 128  Question Id : 6780944931  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A memory buffer used to accommodate a speed differential is called

**Options :**

1. Cache

2. Register

3. Accumulator

4. RAM

**Question Number : 129  Question Id : 6780944932  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which bitwise operator is suitable for turning on a particular bit in a number?

**Options :**

1. && operator

2. & operator

3. | operator

4. || operator

**Question Number : 130  Question Id : 6780944933  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In C, if you pass an array as an argument to a function, what actually gets

passed?

**Options :**

1. Value of elements in array

2. Base address of the array

3. First element of the array

4. Last element of the array

**Question Number : 131  Question Id : 6780944934  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A queue is a _____

**Options :**

1. FIFO

2. LIFO

3. FILO

4. LOFI

**Question Number : 132  Question Id : 6780944935  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The retrieval of items in a stack is _____ operation.

**Options :**

1. push

2. pop

3. retrieval

4. access

**Question Number : 133  Question Id : 6780944936  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not an application of stack?

**Options :**

1. finding factorial

2. tower of Hanoi

3. infix to postfix

4. Solving all the logarithmic functions

**Question Number : 134  Question Id : 6780944937  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The initial configuration of the queue is a,b,c,d (a is the front end). To get the

configuration d,c,b,a one needs a minimum of ?

**Options :**

1. 2 deletions and 3 additions

2. 3 additions and 2 deletions

3. 3 deletions and 3 additions

4. 3 deletions and 4 additions

**Question Number : 135  Question Id : 6780944938  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following data structure cannot store the non-homogeneous data

element?

**Options :**

1. files

2. records

3. Pointers

4. Array

**Question Number : 136  Question Id : 6780944939  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not a nonlinear data structure?

**Options :**

1. Graph

2. Tree

3. Map

4. Stack

**Question Number : 137  Question Id : 6780944940  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following does not keep track of the address of every element in

the list?

**Options :**

1. Linear Array

2. Stack

3. Queue

4. Linked list

The logical or mathematical model of a particular organization of data is called

a_____

**Options :**

1. Data Structure

2. Data arrangement

3. Data configuration

4. Data formation

PING stands for

**Options :**

1. Packet interval gateway

2. Packet internet gateway

3. peer interval gateway

4. packet internet groper

Which of the following is the process of managing data transfer between

components with in the network?

**Options :**

1. Data control

2. Flow control

3. Hop count

4. Error control

Which of the following layer is not present in TCP/IP?

**Options :**

1. Internet layer

2. Network layer

3. Transport layer

4. Physical Layer

**Question Number : 142  Question Id : 6780944945  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Number of network ID in class A networks are

**Options :**

1. 116

2. 126

3. 156

4. 176

**Question Number : 143  Question Id : 6780944946  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The IP4 172.16.255.10  belongs to

**Options :**

1. Class A network

2. Class B network

3. Class C network

4. Class D network

**Question Number : 144  Question Id : 6780944947  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Checksum field takes care of only

**Options :**

1. Connection Oriented

2. Connection less

3. Framing

4. Acknowledgement

**Question Number : 145  Question Id : 6780944948  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not the application of TCP?

**Options :**

1. WWW

2. E-mail

3. FTP

4. DNS

**Question Number : 146  Question Id : 6780944949  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

TCP is

**Options :**

1. Connection oriented

2. Connection less

3. Not use check sum

4. Not reliable in delivering the messages

**Question Number : 147  Question Id : 6780944950  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The length of the internet protocol is

**Options :**

1. 8 bits

2. 16 bits

3. 32 bits

4. 64 bits

**Question Number : 148  Question Id : 6780944951  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

IEEE 802.3 is

**Options :**

1. Token bus

2. Token Ring

3. Ethernet

4. Hub

**Question Number : 149  Question Id : 6780944952  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is the fast memory?

**Options :**

1. ROM

2. PROM

3. DRAM

4. SRAM

**Question Number : 150  Question Id : 6780944953  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not a service of operating system?

**Options :**

1. User interface

2. I/O operations

3. Communications

4. Provides drivers of application software

**Question Number : 151  Question Id : 6780944954  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following state is initiated by the process itself?

**Options :**

1. Running

2. Ready

3. Suspend

4. Block

**Question Number : 152  Question Id : 6780944955  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A process which has just terminated but has yet to relinquish its resources is

called

**Options :**

1. Running process

2. Suspended process

3. Zombie Process

4. Blocked Process

**Question Number : 153 Question Id : 6780944956 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

System calls are usually invoked by using

**Options :**

1. Software interrupts

2. Polling

3. Privileged Interrupts

4. Test Editor

**Question Number : 154 Question Id : 6780944957 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

At a particular time of computation, the value of a counting semaphore is 5.

After 10P operations were completed on this semaphore followed by 15V

operations, the resulting value of the semaphore is

**Options :**

1. 10

2. 15

3. 20

4. 25

**Question Number : 155 Question Id : 6780944958 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical**

An operating system contains 5 user processes each requiring 3 units of resource

'R'. The minimum number of units of R such that no dead lock will occur

**Options :**

1. 5

2. 7

3. 9

4. 11

A system supports 8K pages of 512 bytes each in the virtual address space. Main

memory contains 1K frames. The number of bits of logical and physical address

is

**Options :**

1. 19, 22

2. 22, 19

3. 19, 19

4. 22, 22

Because of a single job could not keep both the CPU and the I/O devices busy

which of the following technique is introduced

**Options :**

1. Scheduling

2. Multithreading

3. Spooling

4. Multiprogramming

Which of the following is the visible portion of operating system?

**Options :**

1. Deadlock Handler

2. Process Scheduler

3. File System

4. Memory management

**Question Number : 159  Question Id : 6780944962  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following disc scheduling algorithm may suffer from Beledy's Anomaly problem?

**Options :**

1. FIFO

2. LRU

3. MFU

4. LFU

**Question Number : 160  Question Id : 6780944963  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following approach may be invoked periodically to test for the deadlock?

**Options :**

1. Deadlock Avoidance

2. Deadlock Prevention

3. Deadlock Detection

4. Deadlock Ignorance

**Question Number : 161  Question Id : 6780944964  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The primary job of Operating System is

**Options :**

1. Manage Commands

2. Manage Users

3. Manage Programs

4. Manage Resources

**Question Number : 162  Question Id : 6780944965  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following can be chosen as primary key of the relation in database Design

**Options :**

1. Name of the Person

2. Age

3. Aadhar Card Number

4. Address

**Question Number : 163  Question Id : 6780944966  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

_____ supports efficient retrieval of records based on the value of a search key

**Options :**

1. Trigger

2. Cursor

3. Index

4. Package

**Question Number : 164  Question Id : 6780944967  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following operation(s) can be done with ALTER command

    I. Insert new rows into the table

    II. Delete records from table

    III. Insert new column into the table

    IV. Modify or drop the columns from table

**Options :**

1. I, II & III

2. II & III

3. III & IV

4. I, II, III & IV

**Question Number : 165  Question Id : 6780944968  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A relation R = ( A, B, C, D, E, F) holds the following functional dependencies

$A \rightarrow BC, \quad A \rightarrow E, \quad B \rightarrow CD, \quad C \rightarrow F$

Which attribute can be chosen as primary key for the relation?

**Options :**

1. EF

2. C

3. A

4. BC

**Question Number : 166  Question Id : 6780944969  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The SQL statement select ROUND(67.987, -2) from dual;

**Options :**

1. It is Illegal

2. prints 68

3. prints 0

4. prints 60

**Question Number : 167  Question Id : 6780944970  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In ordered indices if the file containing the records is sequentially ordered, then _____ is an index, whose search key also defines the sequential order of the file.

**Options :**

1. Clustered index

2. Structured index

3. Unstructured index

4. Non-clustered index

**Question Number : 168  Question Id : 6780944971  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

What operator tests column for the absence of data?

**Options :**

1. EXISTS operator

2. NOT operator

3. IS NULL operator

4. None of these

**Question Number : 169  Question Id : 6780944972  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A_____ is a database object that groups logically related

PL/SQL types, objects and subprograms.

**Options :**

1. Module

2. Package

3. Object

4. Class

**Question Number : 170  Question Id : 6780944973  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

_____ provide a way for your program to select multiple

rows of data from the database and then process each row individually.

**Options :**

1. PL/SQL Cursors

2. PL/SQL Trigger

3. PL/SQL Select

4. PL/SQL Process

**Question Number : 171  Question Id : 6780944974  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A relation is said to be in 3 NF if and only if

    I.   It is already in 2NF

    II.  Transitive dependency should be removed

    III. Only partial functional dependency has to be removed

    IV. Multi-value dependency has to be removed

    V.  It should already in BCNF

**Options :**

1. I & III only

2. II, III & V

3. I, IV & V

4. I & II only

**Question Number : 172  Question Id : 6780944975  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

If a class contains pure virtual function, then it is termed

as_____

**Options :**

1. Virtual class

2. Sealed class

3. Pure Local class

4. Abstract Class

**Question Number : 173  Question Id : 6780944976  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the statements are true?

    I. Function overloading is done at compile time.

    II. Protected members are accessible to the member of derived class.

    III. A derived class inherits constructors and destructors.

    IV. A friend function can be called like a normal function.

    V. Nested class is a derived class.

**Options :**

1. I, II, III

2. II, III, V

3. III, IV, V

4. I, II, IV

**Question Number : 174  Question Id : 6780944977  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In which parameter passing technique of C++ passes only the contents of the

variable to the receiving function

**Options :**

1. by reference

2. by value

3. globally

4.

**Question Number : 175  Question Id : 6780944978  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which one of the following are essential features of an object-oriented

programming language?

    (i) Abstraction and encapsulation

    (ii) Strictly-typedness

    (iii) Type-safe property coupled with sub-type rule

    (iv) Polymorphism in the presence of inheritance

**Options :**

1.  (i) and (ii) only

2.  (i) and (iv) only

3.  (i), (ii) and (iv) only

4.  (i), (iii) and (iv) only

**Question Number : 176  Question Id : 6780944979  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

A Constructor without any parameters is called_____ Constructor.

**Options :**

1.  Custom

2.  Dynamic

3.  Static

4.  Default

**Question Number : 177  Question Id : 6780944980  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

What will be the result of the code?

```
int a = 250, b = 400;
int *p = &a, *q = &b;
p = q;
```

**Options :**

1. b is assigned to a

2. p now points to b

3. a is assigned to b

4. q now points to a

**Question Number : 178  Question Id : 6780944981  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

What is the output of this program?

```
#include <iostream>
using namespace std;
int main()
{
    int i;
    char *arr[] = {"C", "C++", "Java", "VBA"};
    char *(*ptr)[4] = &arr;
    cout << ++(*ptr)[2];
    return 0;
}
```

**Options :**

1. ava

2. java

3. c++

4. compile time error

**Question Number : 179  Question Id : 6780944982  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

In C++, 'friend' keyword can be placed before _____?

**Options :**

1. function declaration

2. function definition

3. main function

4. Package

**Question Number : 180  Question Id : 6780944983  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The if……else statement can be replaced by which operator?

**Options :**

1. Bitwise operator

2. Conditional operator

3. Multiplicative operator

4. Scope Resolution operator

**Question Number : 181  Question Id : 6780944984  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Evaluate the following expression

(true && false) || true || false

**Options :**

1. 0

2. 1

3. false

4. 01

**Question Number : 182  Question Id : 6780944985  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following automatic type conversion is supported in Java?

**Options :**

1. short to int

2. byte to int

3. int to long

4. long to int

**Question Number : 183  Question Id : 6780944986  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

What will be the return type of a method that will not return any value in a Java program?

**Options :**

1. void

2. int

3. double

4. string

**Question Number : 184  Question Id : 6780944987  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is valid statement for declaration, and initializing an array?

**Options :**

1. int [ ] myData;

2. int [ ] myData = (15, 8, 22);

3. int myData [ ] [ ] = {34,19,27,20};

4. int myData [ ] = {34, 63, 77};

**Question Number : 185  Question Id : 6780944988  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The Java Compiler

**Options :**

1. Creates executable file

2. Creates new classes

3. Converts Java Source code to Byte code

4. Produces Java Interpreter

**Question Number : 186  Question Id : 6780944989  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is true?

1. A class can extend more than one class.

2. A class can extend only one class but many interfaces.

3. An interface can extend many interfaces.

4. An interface can implement many interfaces.

5. A class can extend one class and implement many interfaces.

**Options :**

1. 1 and 2

2. 2 and 4

3. 3 and 5

4. 3 and 4

**Question Number : 187  Question Id : 6780944990  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

The concept of multiple inheritance is implemented in Java by

I. Extending two or more classes.

II. Extending one class and implementing one or more interfaces.

III. Implementing two or more interfaces.

**Options :**

1. Only (II)

2. (I) and (II)

3. (II) and (III)

4. Only (I)

**Question Number : 188  Question Id : 6780944991  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following package contains Exception class?

**Options :**

1. java.util

2. java.file

3. java.io

4. java.lang

**Question Number : 189   Question Id : 6780944992   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

What does AWT stands for?

**Options :**

1. All Window Tools

2. All Writing Tools

3. Abstract Window Toolkit

4. Abstract Writing Toolkit

**Question Number : 190   Question Id : 6780944993   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

Which of the following blocks execute automatically whether exception is caught or not?

**Options :**

1. finally

2. catch

3. throws

4. throw

**Question Number : 191   Question Id : 6780944994   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

_____ Method cannot be overridden.

**Options :**

1. super

2. static

3. final

4. Private

**Question Number : 192   Question Id : 6780944995   Display Question Number : Yes   Single Line Question Option : No   Option Orientation : Vertical**

What is the syntax in HTML for creating a link on a webpage?

**Options :**

1. <LINK SRC= "myexams.html">

<A SRC = "myexams.html" >

2.

<BODY LINK = "myexams.html">

3.

< A HREF = "myexams.html">

4.

**Question Number : 193  Question Id : 6780944996  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is valid IP address?

**Options :**

498.11.497.67

1.

192.168.321.10

2.

1.899.432.456

3.

192.168.36.115

4.

**Question Number : 194  Question Id : 6780944997  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

What is the output of the following PHP code?

```php
<?php
$x = 10;
$y = 20;
if ($x > $y + $y != 3)
print "today" ;
  else
  print "tomorrow";
  ?>
```

**Options :**

tomorrow

1.

today

2.

Error

3.

No output

4.

**Question Number : 195  Question Id : 6780944998  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following protocol is used for e-mail services?

**Options :**

1. SMAP

2. SMTP

3. SMIP

4. SMOP

**Question Number : 196  Question Id : 6780944999  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following is not a web server?

**Options :**

1. Microsoft Bing

2. Apache Tomcat

3. Microsoft IIS

4. Oracle Web Tier

**Question Number : 197  Question Id : 6780945000  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which one is the method of Connection object in ADO.Net?

**Options :**

1. open()

2. new()

3. ConnectionOpen()

4. connectionStart()

**Question Number : 198  Question Id : 6780945001  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which one of the following statements instantiates the **mysqli** class in PHP

programming?

**Options :**

1. mysqli = new mysqli()

2. $mysqli = new mysqli()

3. $mysqli->new.mysqli()

4. mysqli->new.mysqli()

**Question Number : 199  Question Id : 6780945002  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

Which of the following function is used to erase all session variables stored in

the current session?

**Options :**

1. session_destroy()

2. session_unset()

3. session_change()

4. session_remove()

**Question Number : 200  Question Id : 6780945003  Display Question Number : Yes  Single Line Question Option : No  Option Orientation : Vertical**

How can you make a bulleted list with numbers?

**Options :**

1. <dl>

2. <ol>

3. <list>

4. <ul>