Telangana State Council of Higher Education

TS ECET [FDH & B.Sc. (Mathematics)] - 2018

Date of Examination: 09-05-2018

Time of Examination: 10.00 A.M. to 1.00 P.M.

Master Question Paper Copy

Computer Science and Engineering

Notations :

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

Question Number : 1 Question Id : 5105295813 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A is square matrix of order 3 and if the matrix obtained by replacing the elements of A with their corresponding cofactors is $\begin{bmatrix} 1 & -2 & 1 \\ 4 & -5 & -2 \\ -2 & 4 & 1 \end{bmatrix}$ then determinant of A is _____

Options :

1. ✖ 9

2. ✖ 16

3. ✔ 3

4. ✖ 4

Question Number : 2 Question Id : 5105295814 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The system of equations $x+y+z=6, x+2y+3z=10, x+2y+\lambda z=K$ is

inconsistent for $\lambda=l$ and $K\neq m$, then (l, m)=

Options :

1. ✖ $(3,\ 7)$

2. ✔ $(3, 10)$

3. ✖ $(7, 10)$

4. ✖ $(10, 4)$

Question Number : 3 Question Id : 5105295815 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A is a square matrix of order n and A=P+Q, where P is symmetric and Q is non symmetric

matrices, then P-Q =

Options :

1. ✖ A

2. ✔ A^T

3. ✖ $A+A^T$

4. ✖ $A-A^T$

Question Number : 4 Question Id : 5105295816 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $A=\begin{bmatrix}1 & 2 & 2\\ 2 & 1 & x\\ -2 & y & -1\end{bmatrix}$ is orthogonal then _____

Options :

1. ✔ x = −2 , y =2

2. ✖ $x = -2 , y = -2$

3. ✖ $x = 2 , y = 2$

4. ✖ $x = 2 , y = -2$

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Question Number : 5 Question Id : 5105295817 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $X = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 2 & 3 \\ 1 & 3 & k \end{bmatrix}$ is singular matrix then k =

Options :

1. ✖ 2

2. ✖ 3

3. ✖ 4

4. ✔ 5

Question Number : 6 Question Id : 5105295818 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\frac{7x-17}{(x-1)(x-3)} = \frac{m}{x-1} + \frac{k}{x-3}$, then m – k -1=

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 3

4. ✖ -2

Question Number : 7 Question Id : 5105295819 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A complex number ‘z ‘ having least modulus value and satisfying $|z - 2 + 2i| = 1$ is _____

Options :

1. $\left(2-\frac{1}{\sqrt{2}}\right)(1+i)$ ✖

2. $\left(2+\frac{1}{\sqrt{2}}\right)(1+i)$ ✖

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

4. $\left(2+\frac{1}{\sqrt{2}}\right)(1-i)$ ✖

Question Number : 8 Question Id : 5105295820 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of the simultaneous equations $x+y=\frac{2\pi}{3}$ and $\cos x+\cos y=\frac{3}{2}$ where x and y are real is _____

Options :

1. $x=\frac{\pi}{3}, y=\pi$ ✖

2. $x=\pi, y=\frac{\pi}{3}$ ✖

3. $x=\pi, y=\frac{\pi}{2}$ ✖

4. does not exist. ✔

Question Number : 9 Question Id : 5105295821 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If both the distinct roots of the equation $|\sin x|^2 + |\sin x| + b = 0$ in $[0, \pi]$ are real then all the values of b lie in the interval _____

Options :

1. ✖ [-2, 0]

2. ✖ (-2, 0)

3. ✔ [-2, 0)

4. ✖ (-2, 0]

Question Number : 10 Question Id : 5105295822 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\frac{a\cos A + b\cos B + c\cos C}{2s} =$$

Options :

1. ✖ Δ

2. ✖ $\frac{1}{R}$

3. ✔ $\frac{r}{R}$

4. ✖ $\frac{\Delta}{R}$

Question Number : 11 Question Id : 5105295823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\cos A = \frac{3}{4}$, then the value of $32\sin\frac{A}{2}.\sin\frac{5A}{2}$

Options :

1. ✔ 11

2. ✖ 36

3. ✖ 27

4. ✖ 10

Question Number : 12 Question Id : 5105295824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $z_1 = 3(\cos 15^0 + i \sin 15^0)$ and $z_2 = 5(\cos 63^0 + i \sin 63^0)$ then $\frac{z_1}{z_2} =$

Options :

1. ✖ $\frac{3}{5}\left[\cos 48^0 + i \sin 48^0\right]$

2. ✔ $\frac{3}{5}\left[\cos 48^0 - i \sin 48^0\right]$

3. ✖ $\frac{3}{5}\left[\cos 78^0 + i \sin 78^0\right]$

4. ✖ $\frac{5}{3}\left[\cos 78^0 - i \sin 78^0\right]$

Question Number : 13 Question Id : 5105295825 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$2\,Tan\frac{1}{7} + Tan^{-1}\frac{1}{13} =$

Options :

1. ✔ $Tan^{-1}\frac{23}{61}$

2. ✖ $Tan^{-1}\frac{14}{61}$

3. ✖ $Tan^{-1}\frac{32}{61}$

4. ✖ $Tan^{-1}\frac{3}{51}$

Note: For this question, discrepancy is found in question/answer. Full Marks is being awarded to all candidates.

Question Number : 14 Question Id : 5105295826 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\cos 20^0 \cos 40^0 \cos 80^0 = p$, then $p =$

Options :

1. ✖ $\frac{1}{2}$

2. ✖ $\frac{1}{4}$

3. ✔ $\frac{1}{8}$

4. ✖ 1

Question Number : 15 Question Id : 5105295827 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\sin A \sin (120^0 - A) \sin (120^0 + A) =$

Options :

1. ✖ $\frac{1}{4} \sin A$

2. ✔ $\frac{1}{4} \sin 3A$

3. ✖ $\frac{1}{4} \cos A$

4. ✖ $\frac{1}{4} \cos 3A$

Question Number : 16 Question Id : 5105295828 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\text{Cos } 5^0 - sin\ 25^0 =$

Options :

1. ✖ $\sin 30^0$

2. ✔ $\sin 35^0$

3. ✖ $\sin 45^0$

4. ✖ $\sin 55^0$

Question Number : 17 Question Id : 5105295829 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If n is the length of perpendicular from the point $(3,-2)$ to the straight line

$L \equiv 12x-5y+6=0$ and m is distance of that line L=0 from $12x - 5y - 7 = 0$, then ____

Options :

1. ✖ $n + m = 2$

2. ✖ $n = m$

3. ✖ $n = 2m$

4. ✔ $n = 4m$

Question Number : 18 Question Id : 5105295830 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The equation of the straight line passing through (2, 3) and perpendicular to the line

$4x-3y = 10$ is _____

Options :

1. ✖ $3x+ 4y+18 = 0$

2. ✔ $3x+ 4y-18 = 0$

3. ✖ $3x- 4y-18 = 0$

4. ✖ $3x-4y+18=0$

Question Number : 19 Question Id : 5105295831 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

L is a straight line passing through the point P(1, 2) such that P bisects the portion of the line intercepted between the coordinate axes, then the perpendicular distance of line L from the origin is _____

Options :

1. ✖ $\frac{1}{\sqrt{5}}$

2. ✖ $\frac{2}{\sqrt{5}}$

3. ✖ $\frac{3}{\sqrt{5}}$

4. ✔ $\frac{4}{\sqrt{5}}$

Question Number : 20 Question Id : 5105295832 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the focus of the parabola $(y-2)^2=4(x-1)$ is (a, b), then a+b =

Options :

1. ✖ (-1, -2)

2. ✖ (1, 2)

3. ✖ (2, 1)

4. ✔ (2, 2)

Question Number : 21 Question Id : 5105295833 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The function $y=|x|$ $-\infty<x<\infty$ is _____

Options :

1. ✖ Differentiable at x=0

2. ✖ not continuous at x=0

3. ✔ continuous and differentiable at $x \neq 0$

4. ✖ continuous but not differentiable at $x \neq 0$

Question Number : 22 Question Id : 5105295834 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\lim_{x \to 0}\left(\frac{\sqrt{1-\cos 2x}}{x}\right)$$

Options :

1. ✔ Does not exist

2. ✖ 1

3. ✖ -1

4. ✖ 0

Question Number : 23 Question Id : 5105295835 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $f(x) = \left|x^2 - 3x + 2\right|$ then $\frac{df}{dx} =$

Options :

1. ✔ 2x-3 when x > 2

2. ✖ 3-2x, when x <1

3. ✖ 3-2x when x>2

4. ✖ 2x+3,when 1<x<2

Question Number : 24 Question Id : 5105295836 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $Z = Log_e\left(\frac{xy}{x+y}\right)$, then $x\frac{\partial Z}{\partial x} + y\frac{\partial Z}{\partial y} =$

Options :

1. ✖ 0

2. ✖ $2Z$

3. ✔ 1

4. ✖ $\frac{Z}{2}$

Question Number : 25 Question Id : 5105295837 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two cars with equal speed V started from a place are such that one is moving towards East and the other is moving towards North. The rate at which they are separated from each other when they travel same distance is _____

Options :

1. ✔ $V\sqrt{2}$

2. ✖ $\frac{V}{\sqrt{2}}$

3. ✖ $\frac{\sqrt{2}}{V}$

4. ✖ $2V^2$

Question Number : 26 Question Id : 5105295838 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The derivative of $\sin x^2$ with respect to x^5 is _____

Options :

1. ✖ $\frac{\cos x^2}{5x^4}$

2. ✖ $\frac{2\cos x^2}{5x^4}$

3. ✔ $\frac{2\cos x^2}{5x^3}$

4. ✖ $\frac{2\sin x^2}{5x^4}$

Question Number : 27 Question Id : 5105295839 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = x^y$ then $\frac{dy}{dx} =$

Options :

1. ✖ $\frac{y}{x(1-y\log x)}$

2. ✔ $\frac{y^2}{x(1-y\log x)}$

3. ✖ $\frac{y^2}{x(1+y\log x)}$

4. ✖ $\frac{y}{(1-y\log x)}$

Question Number : 28 Question Id : 5105295840 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $x = at^2, y = 2at$, then $\frac{d^2y}{dx^2} =$

Options :

1. ✖ $-\frac{1}{t^2}$

2. ✖ $-\frac{1}{2at}$

3. ✔ $-\frac{1}{2at^2}$

4. ✖ $-\frac{1}{2at^4}$

Question Number : 29 Question Id : 5105295841 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $I_1 = \int_0^\infty e^{-x} x^n dx$, then $\int_0^\infty e^{-x^2} x^{2n+1} dx =$

Options :

1. ✖ 0

2. ✔ $\frac{I_1}{2}$

3. ✖ $\frac{I_1}{3}$

4. ✖ $2I_1$

Question Number : 30 Question Id : 5105295842 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\int \frac{\text{Sin } 2x}{\text{Sin } 5x \text{ Sin } 3x} dx = A \log \text{Sin } 3x + B \log \text{Sin } 5x + C$, then A +B =

Options :

1. ✖ 2/7

2. ✖ 1/3

3. ✖ -2/5

4. ✔ 2/15

Question Number : 31 Question Id : 5105295843 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The area of the region bounded by the curve $y = x^2 - x$, x –axis and the line x=2 is _____

Options :

1. ✖ 5/4

2. ✖ 5/3

3. ✔ 5/6

4. ✖ 5/2

Question Number : 32 Question Id : 5105295844 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $0 < x < \frac{\pi}{2}$, then $\int \frac{sinx+cos\,x}{\sqrt{1+sin\,2x}}\,dx =$

Options :

1. ✖ $\frac{1}{x}+c$

2. ✔ $x+c$

3. ✖ $2x+c$

4. ✖ $\frac{2}{x}+c$

Question Number : 33 Question Id : 5105295845 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\int \frac{x^4+1}{x^2+1}\,dx =$

Options :

1. ✖ $\frac{x^3}{3}+x+2Tan^{-1}x+c$

2. ✖ $\frac{x^3}{3}+x+Tan^{-1}x+c$

3. ✔ $\frac{x^3}{3}-x+2Tan^{-1}x+c$

4. ✖ $\frac{x^3}{3}-x+Tan^{-1}x+c$

Question Number : 34 Question Id : 5105295846 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\int \frac{e^x(1-x)}{x^2}dx =$

Options :

1. ✖ $-\frac{1}{xe^x}+C$

2. ✖ $\frac{1}{xe^x}+C$

3. ✔ $-\frac{1}{x}e^x+C$

4. ✖ xe^x+C

Question Number : 35 Question Id : 5105295847 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$\int_0^{\pi/2} \frac{\sin x}{\sin x+\cos x}dx =$

Options :

1. ✔ $\frac{\pi}{4}$

2. ✖ $\frac{\pi}{6}$

3. ✖ $\frac{\pi}{8}$

4. ✖ π

Question Number : 36 Question Id : 5105295848 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\int_0^{\pi/2} \sin^4 x \cos^2 x \ dx =$$

Options :

1. ✖ $\frac{\pi}{12}$

2. ✔ $\frac{\pi}{32}$

3. ✖ $\frac{\pi}{42}$

4. ✖ $\frac{\pi}{2}$

Question Number : 37 Question Id : 5105295849 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of $\left(x+2y^3\right)\frac{dy}{dx}=y$

Options :

1. ✖ $y=x^3+cx$

2. ✔ $x=y^3+cy$

3. ✖ $x=y^2+cy$

4. ✖ $y=x^3+cy^2$

Question Number : 38 Question Id : 5105295850 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The general solution of $\frac{dy}{dx}=\frac{x^2+4x-9}{x+2}$ is _____

Options :

1. ✖ $y=(x+2)^2-13\log|x+2|+c$

2. ✖ $y=(x+2)^2-5\log|x+2|+c$

3. ✖ $y=\frac{x^2}{2}+2x+13\log|x+2|+c$

4. ✔ $y=\frac{x^2}{2}+2x-13\log|x+2|+c$

Question Number : 39 Question Id : 5105295851 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The differential equation representing the family of curves $y^2=2c(x+\sqrt{c})$, where c being a positive parameter is of _____

Options :

1. ✖ Order 3

2. ✖ Order 2

3. ✔ degree 3

4. ✖ degree 1

Question Number : 40 Question Id : 5105295852 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The differential equation formed by eliminating the arbitrary constants a and b from the Equation $\frac{x}{a}+\frac{y}{b}=1$ is _____

Options :

1. ✖ $x\ y' = 1$

2. ✖ $x\ y'' = 0$

3. ✔ $y'' = 0$

4. ✖ $y'' = 1$

Question Number : 41 Question Id : 5105295853 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of the differential equation $\frac{dy}{dx} = (1+x^2)(1+y^2)$ is _____

Options :

1. ✔ $Tan^{-1}y = x + \frac{x^3}{3} + c$

2. ✖ $Tan^{-1}y = x - \frac{x^3}{3} + c$

3. ✖ $Cot^{-1}y = x + \frac{x^3}{3} + c$

4. ✖ $Sin^{-1}y = x + \frac{x^3}{3} + c$

Question Number : 42 Question Id : 5105295854 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of the differential equation $y\,dx - x\,dy + \log x\,dx$ is _____

Options :

1. ✖ $c\,x + y + (1-\log x) = 0$

2. ✔ $c\,x - y - (1+\log x) = 0$

3. ✖ $c\,y + x + \log x - 1 = 0$

4. ✖ $c\,x - y + (1+\log x) = 0$

Question Number : 43 Question Id : 5105295855 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The general solution of the equation $(D^2 - D - 2)y = \sin 2x$,$(D=\frac{d}{dx})$ is _____

Options :

1. ✔ $y= c_1e^{-x}+c_2e^{2x}+\frac{1}{20}(\cos 2x-3\sin 2x)$

2. ✖ $y= c_1e^{-x}+c_2e^{-2x}+\frac{1}{20}(\cos 2x+3\sin 2x)$

3. ✖ $y= c_1e^{-x}+c_2e^{2x}+\frac{1}{20}(\cos 2x-3\sin 3x)$

4. ✖ $y= c_1e^{x}+c_2e^{-2x}+\frac{1}{20}(\cos 2x+3\sin 2x)$

Question Number : 44 Question Id : 5105295856 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The particular integral of $(D^2 - 5D + 6)y = e^{4x}$ is _____

Options :

1. ✖ e^{4x}

2. ✖ $-e^{4x}$

3. ✔ $\frac{1}{2}e^{4x}$

4. ✖ $\frac{1}{4}e^{4x}$

Question Number : 45 Question Id : 5105295857 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If L[f(t)] denotes the Laplace Transform of f (t) , then $L[t^2e^{-2t}] =$

Options :

1. ✖ $\frac{1}{(s+2)^3}$

2. ✔ $\frac{2}{(s+2)^3}$

3. ✖ $\frac{1}{(s+2)^2}$

4. ✖ $\frac{2}{(s+2)^2}$

Question Number : 46 Question Id : 5105295858 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$f:\mathbb{R}\to\mathbb{R},\ f(x)=x^2,-\pi\le x\le\pi$ and $f(x+2\pi)=f(x),\forall x\in\mathbb{R}$. If the Fourier series of

f(x) is represented as $f(x)=\sum_{n=0}^{\infty}a_n\cos nx$, then $a_0=$ _____

Options :

1. ✖ $\frac{2\pi^2}{3}$

2. ✔ $\frac{\pi^2}{3}$

3. ✖ $\frac{4\pi^2}{3}$

4. ✖ $\frac{5\pi^2}{3}$

Question Number : 47 Question Id : 5105295859 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

f(t)= $2t^2-5,-2\le t\le 2$ and $f(t+4)=f(t)$. If $2t^2-5=\sum_{n=0}^{\infty}A_nCos\left(\frac{n\pi t}{2}\right)$, then $A_1=$

Options :

1. ✖ 0

2. ✔ $\frac{-32}{\pi^2}$

3. ✖ $\frac{1-(-1)^n}{n}\frac{2}{\pi^2}$

4. ✖ $\frac{16}{\pi^2}$

Question Number : 48 Question Id : 5105295860 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the Laplace transform of a function f(t) is F(S) , then $\int_0^\infty f(t)dt =$

Options :

1. ✖ F(1)

2. ✖ $F(\infty)$

3. ✔ F(0)

4. ✖ F(S-1)

Question Number : 49 Question Id : 5105295861 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Mean deviation from median for the data 340, 150, 210, 240, 300, 310, 320

is approximately equal to _____

Options :

1. ✔ 52.8

2. ✖ 54.8

3. ✖ 53.8

4. ✖ 51.8

Question Number : 50 Question Id : 5105295862 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two numbers are chosen at random from {1, 2, 3, 4, 5, 6, 7, 8} at a time. The probability that smaller of the two numbers is not more than 3 is

Options :

1. ✖ $\frac{7}{14}$

2. ✔ $\frac{9}{14}$

3. ✖ $\frac{8}{14}$

4. ✖ $\frac{10}{14}$

Display Number Panel: Yes
Group All Questions: No

Question Number : 51 Question Id : 5105295863 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The dimensional formula for angular momentum is _____

Options :

1. ✖ $M\,L\,T^{-1}$

2. ✖ $M\,L^{-1}\,T^{-1}$

3. ✔ $M\,L^{2}\,T^{-1}$

4. ✖ $M^{1}L^{2}T^{-2}$

Question Number : 52 Question Id : 5105295864 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following has not been expressed in proper unit?

Options :

1. ✖ stress/strain = N/m^2

2. ✖ surface tension = N/m

3. ✔ energy = Kg × m/s

4. ✖ pressure = N/m^2

Question Number : 53 Question Id : 5105295865 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Two adjacent sides of a parallelogram are represented by the two vectors I+2J+3K and 3I-2J+K. What is the area of the parallelogram?

Options :

1. ✖ 8

2. ✔ $8\sqrt{3}$

3. ✖ $3\sqrt{8}$

4. ✖ 192

Question Number : 54 Question Id : 5105295866 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Given the points A= (0, a) and B= (1, 2), what is the value of a if the magnitude of the vector $\overline{AB}$ is 1?

Options :

1. ✖ 3

2. ✔ 1

3. ✖ 4

4. ✖ 2

Question Number : 55 Question Id : 5105295867 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A and B are perpendicular, vector A = 5i+7j-3k and B = 2i+2j-ak. What is the value of a?

Options :

1. ✖ -2

2. ✖ 8

3. ✖ -7

4. ✔ -8

Question Number : 56 Question Id : 5105295868 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A block of mass 2 Kg rests on a rough inclined plane making an angle of 30° with the horizontal. The coefficient of static friction between the block and plane is 0.7. The frictional force on the block is _____

Options :

1. ✖ 9.8 N

2. ✔ $0.7 \times 9.8 \times \sqrt{3}$ N

3. ✖ $9.8 \times \sqrt{3}$ N

4. ✖ 0.7×0.9 N

Question Number : 57 Question Id : 5105295869 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A body sliding on a smooth inclined plane required 4 seconds to reach the bottom starting from rest at the top. How much time does it take to cover one-fourth the distance starting from rest at top?

Options :

1. ✖ 1 second

2. ✔ 2 seconds

3. ✖ 4 seconds

4. ✖ 16 seconds

Question Number : 58 Question Id : 5105295870 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A body of mass 2 Kg is hung on a spring balance mounted vertically in a lift. If the lift descends with an acceleration equal to the acceleration due to gravity g, the reading on the spring balance will be changed by _____

Options :

1. ✖ 2 Kg

2. ✖ 4 Kg

3. ✖ 2/g Kg

4. ✔ zero

Question Number : 59 Question Id : 5105295871 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If g is the acceleration due to gravity at the earth surface, the gain in the potential energy of an object of mass is raised, then the surface of the earth to a height equal to the radius R of earth is _____

Options :

1. ✔ (½)mgR

2. ✖ 2mgR

3. ✖ mgR

4. ✖ (¼)mgR

Question Number : 60 Question Id : 5105295872 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A ship of mass 3×10^7Kg initially at rest is pulled by a force of 5×10^4 N through a distance of 3 m. Assume that the resistance due to water is negligible, the speed of the ship is _____

Options :

1. ✖ 1.5 m/s

2. ✖ 60m/s

3. ✔ 0.1 m/s

4. ✖ 5 m/s

Question Number : 61 Question Id : 5105295873 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Clock A is based on oscillations of a spring and clock B is based on pendulum motion. Both clocks run at the same rate on earth. On a planet having the same density as earth but twice the radius, _____

Options :

1. ✖ A will run faster than B

2. ✔ B will run faster than A

3. ✖ both run at the same rate as on earth

4. ✖ both run at equal rates but not the same as on earth

Question Number : 62 Question Id : 5105295874 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The potential energy at a point r when a particle is moving under the central force $F = -Kr^2$ is _____

Options :

1. ✖ K^2/r

2. ✔ K/r

3. ✖ K/r^2

4. ✖ –K/r

Question Number : 63 Question Id : 5105295875 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When the body is acted upon by a resultant force, then work done by the resultant force is equal to _____

Options :

1. ✖ its initial kinetic energy

2. ✖ its initial potential energy

3. ✔ change in the kinetic energy

4. ✖ change in momentum

Question Number : 64 Question Id : 5105295876 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A Jet engine works on the principle of _____

Options :

1. ✖ conservation of energy

2. ✖ conservation of mass

3. ✔ conservation of linear momentum

4. ✖ conservation of angular momentum

Question Number : 65 Question Id : 5105295877 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A Particle is vibrating in simple harmonic motion with an amplitude of 4 cm. At what displacement from the equilibrium position is its energy half potential and half kinetic?

Options :

1. ✖ 1 cm

2. ✖ $\sqrt{2}$cm

3. ✖ 2 cm

4. ✔ $2\sqrt{2}$ cm

Question Number : 66 Question Id : 5105295878 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The walls of Hall built for music concerns should _____

Options :

1. ✖ amplify sound

2. ✖ reflect sound

3. ✖ transmit sound

4. ✔ absorb sound

Question Number : 67 Question Id : 5105295879 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When a surrounding body and listener approach each other the pitch appears to rise and when they move away from each other pitch appears to decrease. This is known as _____

Options :

1. ✔ Doppler's principle

2. ✖ Newton's formula

3. ✖ Interference

4. ✖ Sabine's formula

Question Number : 68 Question Id : 5105295880 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An engine driver moving towards a wall with a velocity of 50 m/sec., emits a note of 1.2 KHz. Speed of sound in air is 350 m/sec. The frequency of the note after reflection from the wall as heard by the engine driver is _____

Options :

1. ✖ 1.2 KHz

2. ✔ 1.6 KHz

3. ✖ 0.24 KHz

4. ✖ 2.4 KHz

Question Number : 69 Question Id : 5105295881 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the maximum number of syllables a person can speak in one second?

Options :

1. ✖ 1

2. ✖ 3

3. ✖ 4

4. ✔ 5

Question Number : 70 Question Id : 5105295882 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The speed of sound in air at NTP is 300m/s, if the air pressure becomes four times then the speed of sound will be _____

Options :

1. ✖ 150 m/s

2. ✖ 300 m/s

3. ✔ 600 m/s

4. ✖ 1200 m/s

Question Number : 71 Question Id : 5105295883 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For the efficiency of the Carnot cycle to be maximum, _____

Options :

1. ✔ the temperature of the source should be infinity

2. ✖ the temperature of the sink should be infinity

3. ✖ the temperature of the source should be zero

4. ✖ both should be infinity

Question Number : 72 Question Id : 5105295884 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Specific heat of a gas at constant volume C_v and at constant pressure C_p are related as

_____

Options :

1. ✖ $C_p/C_v = 1\text{-}R/J$

2. ✔ $C_p - C_v = R/J$

3. ✖ $C_p - C_v = J/R$

4. ✖ $C_p + C_v = R/J$

Question Number : 73 Question Id : 5105295885 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the pressure remains constant the volume of the gas will _____

Options :

1. ✔ increase with the increase in temperature

2. ✖ decrease with the increase in temperature

3. ✖ not change with the temperature

4. ✖ become zero

Question Number : 74 Question Id : 5105295886 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A super conducting material when placed in a magnetic field will _____

Options :

1. ✖ attract the magnetic field towards its centre

2. ✖ attract the magnetic field but transfer it into a concentrated zone

3. ✔ repel all the magnetic lines of force passing through it

4. ✖ not influence the magnetic field

Question Number : 75 Question Id : 5105295887 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For long distance communication _____

Options :

1. ✖ grand index fibers are more suitable

2. ✔ single mode step index fibers are more suitable

3. ✖ step index fibers are more suitable

4. ✖ silica fibers are more suitable

Display Number Panel: Yes
Group All Questions: No

Question Number : 76 Question Id : 5105295888 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The set of quantum number for the 19^{th} electron in chromium is _____

Options :

1. ✔ n=4, l=0, m = 0, S=+1/2 or -1/2

2. ✖ n=3, l=2, m = 1, S=+1/2 or -1/2

3. ✖ n=3, l=2, m = -1, S=+1/2 or -1/2

4. ✖ n=4, l=1, m = 0, S=+1/2 or -1/2

Question Number : 77 Question Id : 5105295889 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which of the following compounds, is coordinate covalent bond present?

Options :

1. ✖ PH_3

2. ✖ H_2O

3. ✔ NH_4OH

4. ✖ HBr

Question Number : 78 Question Id : 5105295890 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Variable valency is shown by _____

Options :

1. ✖ N and O

2. ✔ P and S

3. ✖ F and Cl

4. ✖ N and S

Question Number : 79 Question Id : 5105295891 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In the following balanced equation

$$H_2SO_4 + x\,HI \longrightarrow H_2S + YI_2 + ZH_2O$$

The values of x, Y, Z would be _____

Options :

1. ✖ x=4, Y=8, Z=5

2. ✖ x=6, Y=3, Z=4

3. ✔ x=8, Y=4, Z=4

4. ✖ x=3, Y=5, Z=4

Question Number : 80 Question Id : 5105295892 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

50cc of decinormal NaOH solution will be completely neutralised by 'x' ml of decimolar H_2SO_4 solution. The value of 'x' is _____

Options :

1. ✖ 10

2. ✔ 25

3. ✖ 50

4. ✖ 1

Question Number : 81 Question Id : 5105295893 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Arrange the following in the decreasing order of acidity:

I) H_2SO_3 II) H_3PO_4 III) $HClO_3$

Options :

1. ✖ I > II > III

2. ✖ II > III > I

3. ✔ III > II > I

4. ✖ I > III > II

Question Number : 82 Question Id : 5105295894 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which anion is the weakest conjugate base?

Options :

1. ✖ $C_2H_5O^{\ominus}$

2. ✖ $F^{\ominus}$

3. ✖ $CH_3COO^{\ominus}$

4. ✔ $NO_3^{\ominus}$

Question Number : 83 Question Id : 5105295895 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In the preparation of wrought iron from cast iron, the furnace employed is _____

Options :

1. ✖ Electrical

2. ✖ Open hearth

3. ✔ Reverberatory

4. ✖ Blast

Question Number : 84 Question Id : 5105295896 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Number of coulombs of current required to convert completely one mole of $MnO_4^{\ominus}$ ions in acid medium to one mole of Mn^{+2} ions electrically _____

Options :

1. ✖ 96500

2. ✖ 96500 x 2

3. ✖ 96500 x 6

4. ✔ 5 x 96500

Question Number : 85 Question Id : 5105295897 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following elements has the highest value of the electrochemical equivalent?

Options :

1. ✖ Mg

2. ✖ Ca

3. ✔ K

4. ✖ Na

Question Number : 86 Question Id : 5105295898 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The standard reduction potential for Zn^{+2}/Zn and Cu^{+2}/Cu electrodes are -0.76 V and +0.34 V respectively. For the cell reaction $Zn + Cu^{+2} \rightarrow Zn^{+2} + Cu$ the standard e.m.f is _____

Options :

1. ✔ +1.10 V

2. ✖ -0.42 V

3. ✖ +0.42 V

4. ✖ -1.10 V

Question Number : 87 Question Id : 5105295899 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The type of protection against corrosion applied to marine piers and water box coolers is _____

Options :

1. ✔ Impressed current cathodic protection

2. ✖ Metal rusting

3. ✖ Tinning

4. ✖ Metal painting

Question Number : 88 Question Id : 5105295900 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A metal is dipped separately in different pH solutions of 1, 2, 3 and 4. In which pH solution is the metal easily corroded?

Options :

1. ✔ 1

2. ✖ 2

3. ✖ 3

4. ✖ 4

Question Number : 89 Question Id : 5105295901 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A raw water sample has 300 ppm calcium ions and its $CaCO_3$ equivalent in ppm

is ___

Options :

1. ✖ 625

2. ✔ 750

3. ✖ 1500

4. ✖ 25

Question Number : 90 Question Id : 5105295902 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A Process which removes ionic, non ionic, colloidal and organic matter from water

is _____

Options :

1. ✖ Ion exchange process

2. ✖ Permutit process

3. ✖ Zeolite process

4. ✔ Reverse osmosis

Question Number : 91 Question Id : 5105295903 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The exhausted anion exchange column in the demineralization process is regenerated

by passing a solution of _____

Options :

1. ✖ dil H_2SO_4

2. ✖ dil HCl

3. ✔ dil NaOH

4. ✖ dil NH_4OH

Question Number : 92 Question Id : 5105295904 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which one of the following is not an example of addition polymer?

Options :

1. ✖ Polythene

2. ✔ Terylene

3. ✖ Neoprene

4. ✖ Polystyrene

Question Number : 93 Question Id : 5105295905 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is an example of fibre polymer?

Options :

1. ✖ Rubber

2. ✖ PVC

3. ✖ Bakelite

4. ✔ Nylon-66

Question Number : 94 Question Id : 5105295906 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following can enhance the Physical properties of rubber?

Options :

1. ✖ ZnO

2. ✖ Zn stearate

3. ✔ Sulphur

4. ✖ SiO_2

Question Number : 95 Question Id : 5105295907 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The basic component of the smog may be _____

Options :

1. ✖ O_3

2. ✔ O_3 + PAN

3. ✖ PAN + SO_2

4. ✖ O_3 + PAN + SO_3

Question Number : 96 Question Id : 5105295908 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In Antarctica, Ozone depletion is due to the formation of the following

Compound(s) _____

Options :

1. ✔ Chlorine nitrate

2. ✖ PAN

3. ✖ Acrolein

4. ✖ SO_2 and SO_3

Question Number : 97 Question Id : 5105295909 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The pollutant responsible for smog formation and acid rain is _____

Options :

1. ✔ SO_2

2. ✖ CH_4

3. ✖ He

4. ✖ SO_2Cl_2

Question Number : 98 Question Id : 5105295910 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The normality of 26% (Wt/Vol) solution of ammonia (d=0.55) is approximately ____

Options :

1. ✖ 1.5

2. ✔ 15.3

3. ✖ 0.4

4. ✖ 4

Question Number : 99 Question Id : 5105295911 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Wolframite impurity in Cassiterite is removed by _____

Options :

1. ✖ Liquation

2. ✖ Froth flotation

3. ✔ Electromagnetic separation

4. ✖ Hand picking

Question Number : 100 Question Id : 5105295912 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The highest ranking coal is _____

Options :

1. ✔ Anthracite

2. ✖ Lignite

3. ✖ Bituminous

4. ✖ Peat

Display Number Panel: Yes
Group All Questions: No

Question Number : 101 Question Id : 5105295913 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many select lines are required for a 1-to-8 demultiplexer?

Options :

1. ✖ 2

2. ✔ 3

3. ✖ 4

4. ✖ 5

Question Number : 102 Question Id : 5105295914 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The code where all successive numbers differ from their preceding number by single bit is

Options :

1. ✖ Binary code

2. ✖ BCD

3. ✖ Excess-3

4. ✔ Gray

Question Number : 103 Question Id : 5105295915 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a universal logic gate?

Options :

1. ✖ OR

2. ✖ AND

3. ✖ XOR

4. ✔ NAND

Question Number : 104 Question Id : 5105295916 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many two input AND gates and two input OR gates are required to realize $Y = BD + CE + AB$?

Options :

1. ✖ 1, 1

2. ✖ 4, 2

3. ✔ 3, 2

4. ✖ 2, 3

Question Number : 105 Question Id : 5105295917 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the fastest logic family?

Options :

1. ✖ TTL

2. ✔ ECL

3. ✖ DTL

4. ✖ CMOS

Question Number : 106 Question Id : 5105295918 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A simplified Sum of Products expression for the following Boolean function

F (W,X,Y,Z) = Σ (0,2,4,8,9,10,11,12,13) is

Options :

1. ✔ $\bar{X}\bar{Z} + \bar{Y}\bar{Z} + W\bar{X} + W\bar{Y}$

2. ✖ XZ + YZ + WX + WY

3. ✖ $\overline{XY + YZ + ZX + WX}$

4. ✖ WXY + XYZ + WYZ

Question Number : 107 Question Id : 5105295919 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many entries are there in the truth table of 4 input NAND gate?

Options :

1. ✖ 8

2. ✔ 16

3. ✖ 12

4. ✖ 4

Question Number : 108 Question Id : 5105295920 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following inputs is not accepted by SR flip-flop?

Options :

1. ✔ R is 1, S is 1

2. ✖ R is 0, S is 0

3. ✖ R is 0, S is 1

4. ✖ R is 1, S is 0

Question Number : 109 Question Id : 5105295921 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

How many flip-flops are required to construct a decade counter?

Options :

1. ✔ 4

2. ✖ 8

3. ✖ 5

4. ✖ 10

Question Number : 110 Question Id : 5105295922 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which technique is used by EPROM for erasing purpose?

Options :

1. ✖ force convection

2. ✔ ultraviolet radiation

3. ✖ photo-conduction

4. ✖ electromagnetic waves

Question Number : 111 Question Id : 5105295923 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the major functioning responsibility of the multiplexer?

Options :

1. ✖ decoding the binary information

2. ✖ generation ofall mintermsin an output function

3. ✔ generation of selected path between multiple sources and a single destination

4. ✖ generation of selected path between single source and multiple destinations

Question Number : 112 Question Id : 5105295924 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The sum output bit for a full adder with inputs X,Y, C_I is

Options :

1. ✖ $\overline{XYC_I} + XYC_I$

2. ✔ $\bar{X}\bar{Y}C_I + \bar{X}Y\bar{C_I} + X\bar{Y}\bar{C_I} + XYC_I$

3. ✖ $XYC_I + XY + YC_I$

4. ✖ $\bar{X}\bar{Y} + \bar{Y}\bar{C_I}$

Question Number : 113 Question Id : 5105295925 Question Type : MCQ Option Shuffling : Yes 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 : 114 Question Id : 5105295926 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The memory management and protection mechanisms are enabled with

advanced instruction set when 80286 is operated in

Options :

1. ✖ normal mode

2. ✖ real address mode

3. ✔ virtual address mode

4. ✖ abstract mode

Question Number : 115 Question Id : 5105295927 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For a single task in protected mode, the 80386 can address the virtual memory of

Options :

1. ✖ 32 GB

2. ✖ 64 MB

3. ✖ 32 TB

4. ✔ 64 TB

Question Number : 116 Question Id : 5105295928 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The 80386 input/output system supports _____ different bytes of I/O space

available, if isolated I/O is implemented.

Options :

1. ✖ 32 K

2. ✖ 1 GB

3. ✖ 4 GB

4. ✔ 64 K

Question Number : 117 Question Id : 5105295929 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The bit that indicates whether the segment is page addressable is

Options :

1. ✖ base address

2. ✖ attribute bit

3. ✖ present bit

4. ✔ granularity bit

Question Number : 118 Question Id : 5105295930 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the Default operation size bit, D=1, the code segment operation size selected is

Options :

1. ✖ 8-bit

2. ✖ 16-bit

3. ✔ 32-bit

4. ✖ 64-bit

Question Number : 119 Question Id : 5105295931 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The addressing mode, where the operand value is directly specified is _____

Options :

1. ✔ immediate

2. ✖ direct

3. ✖ definite

4. ✖ relative

Question Number : 120 Question Id : 5105295932 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ addressing mode is most suitable to change the normal sequence of execution of instructions.

Options :

1. ✔ relative

2. ✖ indirect

3. ✖ index with offset

4. ✖ immediate

Question Number : 121 Question Id : 5105295933 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Once the BUS is granted to a device _____

Options :

1. ✔ it activates the BUS busy line

2. ✖ it performs the required operation

3. ✖ it raises an interrupt

4. ✖ it activates unknown line

Question Number : 122 Question Id : 5105295934 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ BUS arbitration approach uses the involvement of the processor

Options :

1. ✔ centralized

2. ✖ distributed

3. ✖ random

4. ✖ circular

Question Number : 123 Question Id : 5105295935 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The signal sent to the device from the processor to the device after receiving an interrupt is

Options :

1. ✔ interrupt-acknowledge

2. ✖ return signal

3. ✖ service signal

4. ✖ permission signal

Question Number : 124 Question Id : 5105295936 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In _____ controlled I/O the processor repeatedly polls I/O device.

Options :

1. ✖ I/O

2. ✖ DMA

3. ✔ Program

4. ✖ Interrupt

Question Number : 125 Question Id : 5105295937 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The time between the receiving of an interrupt and its service is _____

Options :

1. ✖ interrupt delay

2. ✔ interrupt latency

3. ✖ cycle time

4. ✖ switching time

Question Number : 126 Question Id : 5105295938 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An interrupt that can be temporarily ignored is

Options :

1. ✖ vectored interrupt

2. ✖ non-maskable interrupt

3. ✔ maskable interrupt

4. ✖ high priority interrupt

Question Number : 127 Question Id : 5105295939 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

CPU has two modes privileged and non-privileged. In order to change the

mode from privileged to non-privileged

Options :

1. ✖ only hardware interrupt is needed

2. ✔ only software interrupt is needed

3. ✖ either hardware or software interrupt is needed

4. ✖ a non-privileged instruction (which does not generate an interrupt)is needed

Question Number : 128 Question Id : 5105295940 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The interrupt servicing mechanism in which the requesting device identifies itself to the processor to be serviced is _____

Options :

1. ✖ polling

2. ✔ vectored interrupts

3. ✖ interrupt nesting

4. ✖ simultaneous requesting

Question Number : 129 Question Id : 5105295941 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following of an array initialization in C is correct?

Options :

1. ✖ int arr[3] = (1,2,3);

2. ✖ int arr(3) = {1,2,3};

3. ✔ int arr[3] = {1,2,3};

4. ✖ int arr(3) = (1,2,3);

Question Number : 130 Question Id : 5105295942 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following C code is used to create a new node?

Options :

1. ✔ ptr = (NODE*)malloc(sizeof(NODE));

2. ✖ ptr = (NODE*)malloc(NODE);

3. ✖ ptr = (NODE*)malloc(sizeof(NODE*));

4. ✖ ptr = (NODE)malloc(sizeof(NODE));

Question Number : 131 Question Id : 5105295943 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What does 'stack underflow' refer to?

Options :

1. ✖ accessing item from an undefined stack

2. ✖ adding items to a full stack

3. ✔ removing items from an empty stack

4. ✖ index out of bounds exception

Question Number : 132 Question Id : 5105295944 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following array elements will return the top-of-the-stack-element

for a stack S of size N elements

Options :

1. ✔ S[N-1].

2. ✖ S[N].

3. ✖ S[N-2].

4. ✖ S[N+1].

Question Number : 133 Question Id : 5105295945 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which preprocessor command is used for macro definition in C?

Options :

1. ✖ include

2. ✖ ifdef

3. ✔ define

4. ✖ macro

Question Number : 134 Question Id : 5105295946 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A terminal node in a binary tree is called _____

Options :

1. ✖ edge

2. ✖ non-leaf node

3. ✖ branch node

4. ✔ leaf node

Question Number : 135 Question Id : 5105295947 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Advantages of linked list representation of binary trees over arrays

Options :

1. ✖ dynamic size only

2. ✖ ease of insertion/deletion only

3. ✖ ease in randomly accessing a node

4. ✔ both dynamic size and ease in insertion/deletion

Question Number : 136 Question Id : 5105295948 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Level order traversal of a tree is formed with the help of

Options :

1. ✔ breadth first search

2. ✖ depth first search

3. ✖ Dijkstra's algorithm

4. ✖ Prim's algorithm

Question Number : 137 Question Id : 5105295949 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What must be the maximum elements in a complete binary tree with height

of tree being 'h'?

Options :

1. ✔ 2^h-1

2. ✖ h-1

3. ✖ h

4. ✖ 2h

Question Number : 138 Question Id : 5105295950 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which data structure is used for recursive function implementation?

Options :

1. ✖ tree

2. ✔ stack

3. ✖ queue

4. ✖ array

Question Number : 139 Question Id : 5105295951 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Relational operators cannot be used on _____ variables.

Options :

1. ✔ structure

2. ✖ long int

3. ✖ strings

4. ✖ float

Question Number : 140 Question Id : 5105295952 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which is not a valid identifier?

Options :

1. ✖ ecet 2018

2. ✖ _ecet 2018

3. ✔ 2018 ecet

4. ✖ ecet _2018

Question Number : 141 Question Id : 5105295953 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value obtained in the function is given back to main function by using

_____ keyword

Options :

1. ✔ return

2. ✖ static

3. ✖ new

4. ✖ volatile

Question Number : 142 Question Id : 5105295954 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the function that all C programs must contain?

Options :

1. ✖ printf( )

2. ✖ getch( )

3. ✔ main( )

4. ✖ scanf( )

Question Number : 143 Question Id : 5105295955 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The time complexity of merge sort algorithm is _____

Options :

1. ✖ O(n)

2. ✖ O(logn)

3. ✖ $O(n^2)$

4. ✔ O(nlogn)

Question Number : 144 Question Id : 5105295956 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of the following C code?

```
char ch;
int i;
ch = 'G' ;
i = ch – 'A' ;
printf("%d", i) ;
```

Options :

1. ✖ 8
2. ✔ 6
3. ✖ 20
4. ✖ error

Question Number : 145 Question Id : 5105295957 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a characteristic of Virtual Circuit Network?

Options :

1. ✖ There are setup and teardown phases in addition to the data transfer phase
2. ✖ Resources can be allocated during setup phase or on demand
3. ✖ All packets follow the same path established during the connection
4. ✔ Virtual circuit network is implemented in application layer

Question Number : 146 Question Id : 5105295958 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

TCP process may not write and read data at the same speed. So, which of the following are needed for storage.

Options :

1. ✖ Packets

2. ✔ Buffers

3. ✖ Segments

4. ✖ Stacks

Question Number : 147 Question Id : 5105295959 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The first line of HTTP request message is called _____

Options :

1. ✔ Request line

2. ✖ Header line

3. ✖ Status line

4. ✖ Entity line

Question Number : 148 Question Id : 5105295960 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The main function of the network layer is routing _____from the source machine to

the destination machine.

Options :

1. ✖ frames

2. ✖ segments

3. ✔ packets

4. ✖ bit stream

Question Number : 149 Question Id : 5105295961 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which protocol is used to find the physical address of a device?

Options :

1. ✖ IP

2. ✖ ICMP

3. ✖ RARP

4. ✔ ARP

Question Number : 150 Question Id : 5105295962 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The receiver of the data controls the amount of data that are to be sent by the sender

is referred as

Options :

1. ✔ flow control

2. ✖ error control

3. ✖ congestion control

4. ✖ error detection

Question Number : 151 Question Id : 5105295963 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The number of processes completed per unit time is known as _____

Options :

1. ✖ output

2. ✔ throughput

3. ✖ efficiency

4. ✖ capacity

Question Number : 152 Question Id : 5105295964 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which one of the following is a synchronization tool?

Options :

1. ✖ thread

2. ✖ pipe

3. ✔ monitor

4. ✖ socket

Question Number : 153 Question Id : 5105295965 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Choose the set of algorithms for disk scheduling?

Options :

1. ✖ FCFS, LRU, MFU, Optimal

2. ✔ FCFS, SCAN, SSTF, C-Look

3. ✖ FCFS, SJF, Round Robin, priority

4. ✖ SJF, Multilevel queue, short-term, second chance

Question Number : 154 Question Id : 5105295966 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A semaphore is a shared integer variable

Options :

1. ✔ that cannot drop below zero

2. ✖ that cannot be more than zero

3. ✖ that cannot drop below one

4. ✖ that cannot be more than one

Question Number : 155 Question Id : 5105295967 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For what purpose is banker's algorithm used?

Options :

1. ✖ deadlock ignorance

2. ✖ deadlock prevention

3. ✔ deadlock avoidance

4. ✖ deadlock detection

Question Number : 156 Question Id : 5105295968 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The circular weight condition which can cause a dead-lock can be prevented by

defining a/an _____ ordering of resource types.

Options :

1. ✖ arbitrary

2. ✖ Random

3. ✖ hexagonal

4. ✔ linear

Question Number : 157 Question Id : 5105295969 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ scheduler determines which programs are admitted to the system for

processing.

Options :

1. ✖ Daisy chaining

2. ✔ Long-term

3. ✖ DMA

4. ✖ I/O

Question Number : 158 Question Id : 5105295970 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The least recently used policy (LRU) replaces the page in memory that has not been referenced for the _____time.

Options :

1. ✖ shortest
2. ✖ medium
3. ✖ average
4. ✔ longest

Question Number : 159 Question Id : 5105295971 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ devices transfer data in and out as a stream of bytes.

Options :

1. ✖ block-oriented
2. ✔ stream – oriented
3. ✖ CPU- oriented
4. ✖ memory-oriented

Question Number : 160 Question Id : 5105295972 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A process transfers data to (or from) one buffer while the operating system empties (or fills) the other buffer is called _____.

Options :

1. ✖ FIFO
2. ✖ Buffer extension
3. ✔ Buffer swapping

4. ✖ Buffer latency

Question Number : 161 Question Id : 5105295973 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For a disk I/O, the time it takes for the beginning of the sector to reach the head is known as _____

Options :

1. ✖ seek time

2. ✔ rotational delay

3. ✖ access time

4. ✖ through-put

Question Number : 162 Question Id : 5105295974 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The processes that are residing in the main memory and are waiting to execute are kept on a list called_____

Options :

1. ✖ job queue

2. ✔ ready queue

3. ✖ wait queue

4. ✖ device queue

Question Number : 163 Question Id : 5105295975 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Run time mapping from virtual to physical address is done by_____

Options :

1. ✖ CPU

2. ✖ Compiler

3. ✖ PCI

4. ✔ Memory management unit

Question Number : 164 Question Id : 5105295976 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A local replacement policy chooses onlyamong the _____ pages of the process

that generate the page fault in selecting a page to replace.

Options :

1. ✖ global

2. ✔ resident

3. ✖ non-resident

4. ✖ abstract

Question Number : 165 Question Id : 5105295977 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following notations is used for multi-level attributes in an E-R diagram?

Options :

1. ✖ ellipse

2. ✖ dashed ellipse

3. ✔ double ellipse

4. ✖ double rectangle

Question Number : 166 Question Id : 5105295978 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ data independence is the capacity to change the conceptual schema

without having to change external schemas or application programs.

Options :

1. ✖ Physical

2. ✔ Logical

3. ✖ External

4. ✖ Abstract

Question Number : 167 Question Id : 5105295979 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A weak entity type normally has a _____ which is the set of attributes that can uniquely identify weak entities that are related to the same owner entity.

Options :

1. ✖ super key

2. ✖ candidate key

3. ✔ determinant

4. ✖ primary key

Question Number : 168 Question Id : 5105295980 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An attribute of relation schema R is called a _____ attribute of R if it is a member of some candidate key of R.

Options :

1. ✖ Non-prime

2. ✔ Prime

3. ✖ Composite

4. ✖ simple

Question Number : 169 Question Id : 5105295981 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The state of the data accessed by an aborted transaction must be restored to what it was just before the transaction started executing. This process is known as_____

Options :

1. ✔ roll back

2. ✖ save point

3. ✖ commit

4. ✖ terminating

Question Number : 170 Question Id : 5105295982 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

3NF is based on the concept of _____ dependency.

Options :

1. ✖ Local

2. ✔ Transitive

3. ✖ Global

4. ✖ virtual

Question Number : 171 Question Id : 5105295983 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A relation schema R is in _____ ,if every nonprime attribute A in R is fully functionally dependent on the primary key of R.

Options :

1. ✖ 1NF

2. ✖ 3NF

3. ✔ 2NF

4. ✖ 4NF

Question Number : 172 Question Id : 5105295984 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which command is used to remove a table and its contents from the database?

Options :

1. ✖ delete table

2. ✖ remove table

3. ✔ drop table

4. ✖ alter table

Question Number : 173 Question Id : 5105295985 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Polymorphism refers to the ability to associate multiple meanings to one function

name by means of a special mechanism known as _____ binding.

Options :

1. ✔ Late

2. ✖ Virtual

3. ✖ Abstract

4. ✖ Early

Question Number : 174 Question Id : 5105295986 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What will happen in this code?

```
int a =100, b =200;
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 : 175 Question Id : 5105295987 Question Type : MCQ Option Shuffling : Yes 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()
    {
    char *ptr;
    char str[]="abcdefg";
    ptr=str;
    ptr+=5;
    cout<<ptr;
    return 0;
    }
```

Options :

1. ✔ fg

2. ✖ cdef

3. ✖ defg

4. ✖ abcd

Question Number : 176 Question Id : 5105295988 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of this program?

```
#include <iostream>
    #include <cstring>
    using namespace std;
    int main ()
    {
    char str1[10]="Hello";
    char str2[10]="World";
    char str3[10];
    int len;
    strcpy( str3, str1);
    strcat( str1, str2)
    len=strlen(str1);
    cout<<len<<endl;
    return 0;
    }
```

Options :

1. ✖ 5
2. ✖ 55
3. ✖ 11
4. ✔ 10

Question Number : 177 Question Id : 5105295989 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not the member of class?

Options :

1. ✖ static function

2. ✔ friend function

3. ✖ const function

4. ✖ virtual function

Question Number : 178 Question Id : 5105295990 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of the following (when embedded in a complete program)?

```
int n = 5;
while  (--n > 0)
{
    if ( n == 2 )
break ;
cout<< n <<" " ;
}
cout<<" End of Loop." ;
```

Options :

1. ✔ 4 3 End of Loop

2. ✖ 4 3

3. ✖ 5 4 3 End of Loop

4. ✖ 3 4 End of Loop

Question Number : 179 Question Id : 5105295991 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A default catch block catches

Options :

1. ✖ all thrown objects

2. ✖ no thrown objects

3. ✔ any thrown object that has not been caught by an earlier catch block

4. ✖ all thrown objects that have been caught by an earlier catch block

Question Number : 180 Question Id : 5105295992 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A/An _____ is a member function of a class that is called automatically

when an object of the class goes out of scope.

Options :

1. ✔ Destructor

2. ✖ Constructor

3. ✖ Class

4. ✖ Object

Question Number : 181 Question Id : 5105295993 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Member functions that allow you to find out the values of the private variables of a

class are called _____ functions.

Options :

1. ✖ Imitator

2. ✖ Constant

3. ✔ Accessor

4. ✖ Derived

Question Number : 182 Question Id : 5105295994 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A/An _____ function of a class is not a member function of the class but has access to the private members of the class just as a member function does.

Options :

1. ✖ Member
2. ✖ Constructor
3. ✖ Over loaded
4. ✔ Friend

Question Number : 183 Question Id : 5105295995 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of this program?

```
Class dynamic_initialization
  {
Public static void main(String args[])
  {
double a, b;
    a = 3.0;
    b = 4.0;
    double c = Math.sqrt(a * a + b * b);
    system.out.println(c);
  }
}
```

Options :

1. ✔ 5.0

2. ✖ 25.0

3. ✖ 7.0

4. ✖ Compilation error

Question Number : 184 Question Id : 5105295996 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is a necessary condition for automatic type conversion in

Java?

Options :

1. ✖ The destination type is smaller than source type

2. ✔ The destination type is larger than source type and compatible

3. ✖ The destination type can be larger or smaller than source type

4. ✖ The destination type can be of any type but larger than source type

Question Number : 185 Question Id : 5105295997 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the error in this code fragment?

```
byte b = 50;

b = b * 50;
```

Options :

1. ✖ b cannot contain value 100, limited by its range.

   * operator has converted b * 50 into int, which cannot be converted to byte

2. ✔ without casting.

3. ✖ b cannot contain value 50.

4. ✖ No error in this code

Question Number : 186 Question Id : 5105295998 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When is method overloading determined?

Options :

1. ✖ At run time

2. ✔ At compile time

3. ✖ At coding time

4. ✖ At execution time

Question Number : 187 Question Id : 5105295999 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not OOP concept in Java?

Options :

1. ✖ Inheritance

2. ✖ Encapsulation

3. ✖ Polymorphism

4. ✔ Compilation

Question Number : 188 Question Id : 5105296000 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which concept of Java is achieved by combining methods and attributes into a class?

Options :

1. ✔ Encapsulation

2. ✖ Inheritance

3. ✖ Polymorphism

4. ✖ Abstraction

Question Number : 189 Question Id : 5105296001 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these keywords cannot be used for exception handling in JAVA?

Options :

1. ✖ try

2. ✖ finally

3. ✔ thrown

4. ✖ catch

Question Number : 190 Question Id : 5105296002 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these methods waits for the thread to terminate?

Options :

1. ✖ sleep()

2. ✖ isAlive()

3. ✔ join()

4. ✖ stop()

Question Number : 191 Question Id : 5105296003 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is synchronization in reference to a thread?

Options :

1. ✔ It's a process of handling situations when two or more threads need access to a shared resource

2. ✖ It's a process by which many threads are able to access same shared resource simultaneously

It's a process by which a method is able to access many different threads simultaneously

3. ✖

It's a method that allows many threads to access any information required

4. ✖

Question Number : 192 Question Id : 5105296004 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these functions is called to display the output of an applet?

Options :

1. ✖ display()

2. ✔ paint()

3. ✖ displayApplet()

4. ✖ PrintApplet()

Question Number : 193 Question Id : 5105296005 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ is a web's native protocol.

Options :

1. ✖ SLIP

2. ✖ TCP/IP

3. ✔ HTTP

4. ✖ PPP

Question Number : 194 Question Id : 5105296006 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. ✖ SMAP

2. ✔ SMTP

3. ✖ SMIP

4. ✖ SMOP

Question Number : 195 Question Id : 5105296007 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following attributes is mandatory for image tag in HTML?

Options :

1. ✖ align

2. ✖ border

3. ✖ hspace

4. ✔ src

Question Number : 196 Question Id : 5105296008 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The _____ statement is ideal when someone wants to output a blend of

static text and dynamic information stored within one or several variables.

Options :

1. ✖ echo( )

2. ✔ printf( )

3. ✖ print( )

4. ✖ sprintf( )

Question Number : 197 Question Id : 5105296009 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is type juggling in PHP?

Options :

1. ✔ PHP does not require explicit type definition in a variable declaration

2. ✖ PHP supports automatic type casting

3. ✖ PHP allows mapping string to an array

4. ✖ PHP functions need to have data type for indexing

Question Number : 198 Question Id : 5105296010 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following tags is used to insert JavaScript code in HTML?

Options :

1. ✖ <jscode>

2. ✔ <script>

3. ✖ <javascript>

4. ✖ <code>

Question Number : 199 Question Id : 5105296011 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The _____ superglobal is a catch all of sorts, recording variables passed to a script via the GET, POST and COOKIE methods.

Options :

1. ✖ $GLOBALS

2. ✖ $_SESSION

3. ✖ $_ENV

4. ✔ $_REQUEST

Question Number : 200 Question Id : 5105296012 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The _____ function in PHP defines a constant by assigning a value to a name.

Options :

1. ✔ define( )
2. ✖ const( )
3. ✖ constant( )
4. ✖ define_constant( )