Telangana State Council Higher Education

Notations :

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

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

Question Paper Name :	Computer Science and Engineering 20th May 2023 Shift1 SET1
Subject Name :	Computer Science and Engineering
Creation Date :	2023-05-20 13:03:31
Duration :	180
Total Marks :	200
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Calculator :	None
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	Yes
Highlighter :	No
Auto Save on Console?	Yes
Change Font Color :	No
Change Background Color :	No
Change Theme :	No

Help Button :	No
Show Reports :	No
Show Progress Bar :	No

Computer Science and Engineering

Group Number :	1
Group Id :	15920726
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	200
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	15920798
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0

Sub-Section Number : 1

Sub-Section Id : 159207119

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 1 Question Id : 1592075016 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Let $A=\begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$. If $A^2 = \alpha A + \beta I$, where I is the 2 x 2 identity matrix, then (α, β) =

Options :

1. ✖ $(5, 7)$

2. ✖ $(-5, -7)$

3. ✖ $(-5, 7)$

4. ✔ $(5, -7)$

Question Number : 2 Question Id : 1592075017 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If (a + b + c) = 5, then

$$\det\begin{bmatrix} a-b-c & 2b & 2c \\ 2a & b-c-a & 2c \\ 2a & 2b & c-a-b \end{bmatrix} =$$

Options :

1. ✖ 5

2. ✖ 25

3. ✔ 125

4. ✖ 625

Question Number : 3 Question Id : 1592075018 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\begin{bmatrix} 4 & 3 \\ 9 & 7 \end{bmatrix}\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 18 \\ 41 \end{bmatrix}$, then $12x + 10y =$

Options :

1. ✖ 58

2. ✔ 56

3. ✖ 54

4. ✖ 52

Question Number : 4 Question Id : 1592075019 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\log_{16} x + \log_4 x + \log_2 x = 7$, then x =

Options :

1. ✔ 16

2. ✖ 32

3. ✖ 64

4. ✖ 128

Question Number : 5 Question Id : 1592075020 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\frac{2x^2-6x+5}{x^3-6x^2+11x-6} = \frac{A}{x-1} + \frac{B}{x-2} + \frac{C}{x-3}$, then $10A + B + 2C =$

Options :

1. ✖ 5

2. ✖ 7

3. ✔ 9

4. ✖ 11

Question Number : 6 Question Id : 1592075021 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\log_x (3x^2 + 10x) = 3$, then x =

Options :

1. ✖ 3

2. ✔ 5

3. ✖ 7

4. ✖ 9

Question Number : 7 Question Id : 1592075022 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of $\sin^2 45^o + \sin^2 135^o + \sin^2 225^o + \sin^2 315^o$ is

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 0

4. ✖ 4

Question Number : 8 Question Id : 1592075023 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In a ΔABC, if a = 3, b = 4 and $\sin A = \frac{3}{4}$, then the angle B =

Options :

1. ✖ 45^o

2. ✖ 60^o

3. ✔ 90^o

4. ✖ 70^o

Question Number : 9 Question Id : 1592075024 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\sin^2 36^o - \sin^2 18^o =$

Options :

1. ✖ $\frac{1}{2}$

2. ✔ $\frac{1}{4}$

3. ✖ $\frac{1}{8}$

4. ✖ 1

Question Number : 10 Question Id : 1592075025 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The period of the function $\cos\left(\frac{5}{3}\right)\sin\left(\frac{2x}{3}\right)+\sin\left(\frac{5}{3}\right)\cos\left(\frac{2x}{3}\right)$ is

Options :

1. ✖ π

2. ✖ 2π

3. ✔ 3π

4. ✖ $\frac{3\pi}{2}$

Question Number : 11 Question Id : 1592075026 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\cosh x = \frac{5}{4}$, then $\coth 2x =$

Options :

1. ✔ $\frac{17}{15}$

2. ✖ $\frac{5}{3}$

3. ✖ $\frac{15}{17}$

4. ✖ $\frac{3}{5}$

Question Number : 12 Question Id : 1592075027 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The modulus of the complex number $\frac{2+i}{3-i}$ is

Options :

1. ✖ $\frac{1}{\sqrt{3}}$

2. ✖ 1

3. ✖ $\sqrt{2}$

4. ✔ $\frac{1}{\sqrt{2}}$

Question Number : 13 Question Id : 1592075028 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the sides of a triangle are 13,7 and 8, then the greatest angle of the triangle is

Options :

1. ✖ $\frac{\pi}{3}$

2. ✖ $\frac{\pi}{2}$

3. ✔ $\frac{2\pi}{3}$

4. ✖ $\frac{3\pi}{2}$

Question Number : 14 Question Id : 1592075029 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the angles of a triangle are in the ratio of $1:4:5$, then the ratio of the greatest side to the smallest side is

Options :

1. ✔ $4:\sqrt{5}-1$

2. ✖ 5:4

3. ✖ $\sqrt{5}$-1:4

4. ✖ $4:\sqrt{5}$

Question Number : 15 Question Id : 1592075030 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Number of tangents drawn at a point of the circle is

Options :

1. ✔ One

2. ✖ Two

3. ✖ Three

4. ✖ Many

Question Number : 16 Question Id : 1592075031 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The minimum value of $f(x) = |x-2| + |x+2|$ is

Options :

1. ✖ 0

2. ✖ 2

3. ✔ 4

4. ✖ 8

Question Number : 17 Question Id : 1592075032 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The eccentricity of ellipse $\frac{x^2}{16} + \frac{y^2}{4} = 1$ is

Options :

1. ✖ $2\sqrt{3}$

2. ✖ $\sqrt{2}$

3. ✔

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

4. ✖ $\sqrt{3}$

Question Number : 18 Question Id : 1592075033 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\lim_{x\to\infty}\left(1+\frac{2}{x}\right)^{x}$ =

Options :

1. ✖ e

2. ✔ e^2

3. ✖ e^3

4. ✖ e^4

Question Number : 19 Question Id : 1592075034 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\frac{d}{dx}\left(\sqrt{\sin\sqrt{x}}\right)$ =

Options :

1. ✖ $\frac{1}{4}\frac{\sin\sqrt{x}}{\sqrt{x}}$

2. ✖ $\frac{1}{6}\frac{\cos\sqrt{x}}{\sqrt{x}}$

3. ✔ $\frac{1}{4}\frac{\cos\sqrt{x}}{\sqrt{x}\sqrt{\sin\sqrt{x}}}$

4. ✖ $\frac{1}{2}\frac{\cos\sqrt{x}}{\sqrt{\sin\sqrt{x}}}$

Question Number : 20 Question Id : 1592075035 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $x = 2\cos t - \cos 2t$, $y = 2\sin t - \sin 2t$, then $\frac{dy}{dx}$ at $t=\frac{\pi}{6}$ is

Options :

1. ✖ 0

2. ✔ 1

3. ✖ $\sqrt{3}$

4. ✖ $\frac{1}{\sqrt{3}}$

Question Number : 21 Question Id : 1592075036 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $y = \cos(x + y)$, then $\frac{dy}{dx} =$

Options :

1. ✖ $\frac{1-\sin(x+y)}{\cos x+\cos y}$

2. ✖ $\frac{1+\sin(x+y)}{\cos x-\cos y}$

3. ✖ $\frac{\cos(x+y)}{1+\sin(x+y)}$

4. ✔ $\frac{-\sin(x+y)}{1+\sin(x+y)}$

Question Number : 22 Question Id : 1592075037 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The equation of tangent to the curve $xy = 16$ at P (4, 4) is

Options :

1. ✖ $x + y = 2$

2. ✖ $x + y = 4$

3. ✔ $x + y = 8$

4. ✖ $x + y = 16$

Question Number : 23 Question Id : 1592075038 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum value of $f(x) = \left(\frac{1}{x}\right)^x$ is

Options :

1. ✔ $e^{1/e}$

2. ✖ $\left(\frac{1}{e}\right)^e$

3. ✖ $\left(\frac{1}{e}\right)^{1/e}$

4. ✖ e^e

Question Number : 24 Question Id : 1592075039 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If u (x, y, z) = log $\left(x^3+y^3+z^3-3xyz\right)$, then $\frac{\partial u}{\partial x}+\frac{\partial u}{\partial y}+\frac{\partial u}{\partial z}$ =

Options :

1. ✖ $\frac{1}{x+y+z}$

2. ✖ $\frac{9}{x+y+z}$

3. ✖ $\frac{6}{x+y+z}$

4. ✔ $\frac{3}{x+y+z}$

Question Number : 25 Question Id : 1592075040 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $u(x, y) = \log\left(\frac{x^4+y^4}{x+y}\right)$, then $x\frac{\partial u}{\partial x}+y\frac{\partial u}{\partial y}$ =

Options :

1. ✖ 4

2. ✔ 3

3. ✖ 2

4. ✖ 1

Question Number : 26 Question Id : 1592075041 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\int \frac{\sin\left(\tan^{-1}x\right)}{1+x^2}dx$ =

Options :

1. ✔ $-\cos(\tan^{-1}x) + c$

2. ✖ $\cos(\tan^{-1}x) + c$

3. ✖ $\sin(\tan^{-1}x) + c$

4. ✖ $-\sin(\tan^{-1}x) + c$

Question Number : 27 Question Id : 1592075042 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$\int \frac{1}{e^{2x}+e^{x}}dx$$

Options :

1. ✖ $\log(e^{x}+1) - e^{-x} + c$

2. ✖ $\log\left(\frac{e^{x}+1}{e^{x}}\right)+c$

3. ✔ $\log(e^{-x}+1) - e^{-x} + c$

4. ✖ $\log\left(\frac{e^{-x}}{e^{x}+1}\right)+e^{-x}+c$

Question Number : 28 Question Id : 1592075043 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of the integral $\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} sin\,|x|\,dx$ is

Options :

1. ✖ 0

2. ✖ 1

3. ✖ −2

4. ✔ 2

Question Number : 29 Question Id : 1592075044 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The curves $y = x^2 - 4$ and $y = 1 - x^2$ together enclose an area of

Options :

1. ✖ $10\sqrt{10}$

2. ✖ $5\sqrt{10}$

3. ✔

$\frac{10\sqrt{10}}{3}$

4. ✖ $\frac{10\sqrt{10}}{9}$

Question Number : 30 Question Id : 1592075045 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The RMS value of the f(x) = $\sqrt{\log x}$ on [1, e] is

Options :

1. ✖ $\sqrt{\frac{e}{e-1}}$

2. ✖ $\sqrt{\frac{e-1}{e}}$

3. ✔ $\frac{1}{\sqrt{e-1}}$

4. ✖ $\sqrt{e-1}$

Question Number : 31 Question Id : 1592075046 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The approximate value of the integral $\int_0^1 \frac{1}{1+x}dx$, using Trapezoidal rule with h = 0.5, is

Options :

1. ✖ 0.69450

2. ✔ 0.70834

3. ✖ 0.67435

4. ✖ 0.68500

Question Number : 32 Question Id : 1592075047 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The velocity of a body as a function of time is given as

$v(t) = 5e^{-2t} + 4$, where t is in seconds and v is in m/s. The acceleration when t = 5 in m/s^2 is

Options :

1. ✔ $-10e^{-10}$

2. ✖ $-20e^{-10}$

3. ✖ $-30e^{-10}$

4. ✖ $-40e^{-10}$

Question Number : 33 Question Id : 1592075048 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The order and degree of the differential equation

$\frac{d^2y}{dx^2} + \left(\frac{dy}{dx}\right)^2 + x = 0$ respectively are

Options :

1. ✖ 3 and 3

2. ✖ 2 and 2

3. ✖ 2 and 3

4. ✔ 2 and 1

Question Number : 34 Question Id : 1592075049 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of $ye^x dx + (y-1)dy = 0$ is

Options :

1. ✖ $e^x - \log y = c$

2. ✖ $e^x - y = c$

3. ✖ $e^x - y - \log x = c$

4. ✔ $e^x + y - \log y = c$

Question Number : 35 Question Id : 1592075050 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $sinx\ \frac{dy}{dx} + y\ cosx = x\ sinx$, then $(y-1)sinx =$

Options :

1. ✖ $c - x\ sinx$

2. ✖ $c + x\ sinx$

3. ✔ $c - x\,cosx$

4. ✖ $c + x\,cosx$

Question Number : 36 Question Id : 1592075051 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation

$(e^y + 1)cosx\,dx + e^y sinx\,dy = 0$ is

Options :

1. ✔ $(e^y + 1)sinx = c$

2. ✖ $e^x sinx = c$

3. ✖ $(e^x + 1)cosx = c$

4. ✖ $(e^y - 1)sinx = c$

Question Number : 37 Question Id : 1592075052 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The differential equation satisfied by $y = \frac{A}{x} + B$, (A,B are parameters) is

Options :

1. ✖ $x^2y_1 = y$

2. ✖ $xy_1 + 2y_2 = 0$

3. ✔ $xy_2 + 2y_1 = 0$

4. ✖ $x^2y_1 - 2y = 0$

Question Number : 38 Question Id : 1592075053 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of $\log(\frac{dy}{dx}) = 3x + 3y$ is

Options :

1. ✖ $e^{3x} + e^{3y} = c$

2. ✖ $e^{-3x} + e^{-3y} = c$

3. ✖ $e^{-3x}+e^{3y}=c$

4. ✔ $e^{3x}+e^{-3y}=c$

Question Number : 39 Question Id : 1592075054 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $y\,dx+y^2dy=x\,dy, x\in\mathbb{R}, y>0$ *and* $y(1)=1$, then $y(-3)=$

Options :

1. ✔ 3

2. ✖ 2

3. ✖ 1

4. ✖ 5

Question Number : 40 Question Id : 1592075055 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$L\{\sin 2t - 2t\cos 2t\} =$$

Options :

1. ✖ $\frac{2}{(s^2+4)^2}$

2. ✖ $\frac{8}{(s^2+4)^2}$

3. ✔ $\frac{16}{(s^2+4)^2}$

4. ✖ $\frac{32}{((s^2+4))^2}$

Question Number : 41 Question Id : 1592075056 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$L\{\cosh 3t\ \cos 3t\} =$$

Options :

1. ✖ $\frac{1}{2}\left[\frac{s-6}{s^2-3s+18}+\frac{s+6}{s^2+3s+18}\right]$

2. ✔

$$\frac{1}{2}\left[\frac{s-3}{s^2-6s+18}+\frac{s+3}{s^2+6s+18}\right]$$

3. ✖ $$\frac{1}{2}\left[\frac{s-4}{s^2-4s+9}+\frac{s-3}{s^2-6s+9}\right]$$

4. ✖ $$\frac{1}{2}\left[\frac{s-6}{s^2+9}+\frac{s+6}{3s^2+9}\right]$$

Question Number : 42 Question Id : 1592075057 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$$L\left\{\frac{1-\cos 3t}{t}\right\}=$$

Options :

1. ✖ $$\frac{1}{2}\log\left(\frac{s^2+9}{s^2+3}\right)$$

2. ✖ $$\frac{1}{2}\log\left(\frac{s}{s+9}\right)$$

3. ✖ $$\frac{1}{2}\log\left(\frac{s}{s^2+9}\right)$$

4.

$\frac{1}{2}\log\left(\frac{s^2+9}{s^2}\right)$

Question Number : 43 Question Id : 1592075058 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Laplace transform of f(t) = t sin t is F(s) where F(s) =

Options :

1. $\frac{s}{\left(1+s^2\right)^2}$

2. $\frac{2s}{\left(1+s^2\right)^2}$

3. $\frac{2s}{1+s^2}$

4. $\frac{s}{1+s^2}$

Question Number : 44 Question Id : 1592075059 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $L^{-1}\left\{\frac{2s^2-1}{(s^2+1)(s^2+4)}\right\} = f(t)$, then $f\left(\frac{\pi}{2}\right) =$

Options :

1. ✖ 1

2. ✔ −1

3. ✖ 2

4. ✖ −2

Question Number : 45 Question Id : 1592075060 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$\int_0^\infty \frac{e^{-3t}-e^{-6t}}{t}dt =$

Options :

1. ✖ log 6

2. ✖ log 3

3. ✔ log 2

4. ✖ log 18

Question Number : 46 Question Id : 1592075061 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation

$y'' - 2y' + 2y = 0$ satisfying $y(0) = y'(0) = 1$ is

Options :

1. ✖ $e^t + e^{-2t}\cos t$

2. ✖ $e^t + \cos t$

3. ✖ $e^t \sin t$

4. ✔ $e^t \cos t$

Question Number : 47 Question Id : 1592075062 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The value of the Fourier coefficient a_0 in the Fourier series expansion of $f(x) = x \sin x$ in $(0, 2\pi)$ is

Options :

1. ✖ 2

2. ✔ -2

3. ✖ 1

4. ✖ -1

Question Number : 48 Question Id : 1592075063 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If b_1, b_2 are Fourier coefficients in the Fourier series expansion of $f(x) = |\sin x|$ in $(-\pi, \pi)$, then $b_1 + b_2 =$

Options :

1. ✖ $\frac{2}{\pi}$

2. ✖ $-\frac{2}{\pi}$

3. ✔ 0

4. ✖ $\frac{4}{\pi}$

Question Number : 49 Question Id : 1592075064 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At $x = 0$, the Fourier series of $f(x) = \begin{cases} \pi + x & \text{if } -\pi < x < 0 \\ 0 & \text{if } 0 \le x < \pi \end{cases}$ converges to

Options :

1. ✖ π

2. ✖ 0

3. ✖ $-\pi$

4. ✔ $\frac{\pi}{2}$

Question Number : 50 Question Id : 1592075065 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $x = \frac{\pi}{2} + \sum_{n=1}^{\infty} a_n \cos nx, \quad 0 < x < \pi,$ then the value of a_n is

Options :

1. $\frac{2}{\pi n^2}\left[(-1)^n - 1\right]$ ✔

2. $\frac{2}{\pi n^2}$ ✖

3. 0 ✖

4. $\frac{4}{\pi n^2}$ ✖

Physics

Section Id :	15920799
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Enable Mark as Answered Mark for Review and Clear Response :	Yes

Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	159207120
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 51 Question Id : 1592075066 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If F is force, x is distance and t is time, then the dimensions of $\frac{b}{a}$ in the equation $F = \frac{b-x}{at}$ are same as that of

Options :

1. ✖ Velocity

2. ✖ Force

3. ✔ Momentum

4. ✖ Time

Question Number : 52 Question Id : 1592075067 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The static friction is

Options :

1. ✖ Equal to the dynamic friction

2. ✔ Always greater than the dynamic friction

3. ✖ Always less than the dynamic friction

4. ✖ Sometimes less than and sometimes equal to dynamic friction

Question Number : 53 Question Id : 1592075068 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A vector A points vertically upward and B points towards north, the vector product of B x A is

Options :

1. ✖ Along west

2. ✔ Along east

3. ✖ Vertically downward

4. ✖ No direction

Question Number : 54 Question Id : 1592075069 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A Vector A has magnitude 9/2 unit towards north, the direction of vector -6A and 8A .

Options :

1. ✖ -27 units and 36 units towards south

2. ✖ -27 units and 36 units towards north

3. ✔ -27 units towards south and 36 units towards north

4. ✖ -27 units towards west and 36 units towards east

Question Number : 55 Question Id : 1592075070 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Angular displacement of a particle is described as $\theta = 2t + 3t^2$, the angular velocity (in rad/sec) at t = 2 sec is

Options :

1. ✖ 2

2. ✖ 6

3. ✖ 16

4. ✔ 14

Question Number : 56 Question Id : 1592075071 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The acceleration of a car moving on a straight road with a constant velocity of 40 m/sec is

Options :

1. ✖ 30 m/s^2

2. ✖ 20 m/s^2

3. ✔ 0 m/s^2

4. ✖ $40\ m/s^2$

Question Number : 57 Question Id : 1592075072 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two wires of same length and made with same material are stretched with the same force. If the radii of the wires are in the ratio 1:3, then the ratio of their elongations is

Options :

1. ✖ 1:3

2. ✔ 9:1

3. ✖ 3:1

4. ✖ 1:9

Question Number : 58 Question Id : 1592075073 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Along a stream line flow of fluid

Options :

1. ✖ The velocity of all fluid particles at a given instant is constant.

2. ✖ The velocity of a fluid particle remains constant.

3. ✔ The velocity of all fluid particles crossing a given position is constant.

4. ✖ The speed of a fluid particle remains constant.

Question Number : 59 Question Id : 1592075074 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following gives the relation between C_p and C_v

Options :

1. ✔ $C_p - C_v = R$

2. ✖ $Cp = Cv$

3. ✖ $Cp - Cv > R$

4. ✖ $Cp / Cv = R$

Question Number : 60 Question Id : 1592075075 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Compressed air coming out of punctured football becomes cooler because.

Options :

1. ✔ Adiabatic expansion

2. ✖ Isothermal expansion

3. ✖ Energy dissipation

4. ✖ See-beck effect

Question Number : 61 Question Id : 1592075076 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The work done (Joule) by a 1 mole of a perfect gas when it expands isothermally to double its volume. The initial temperature of the gas is 0^0C and $R = 8.31 \times 10^7$ erg- mol^{-1} . K^{-1}. ($\log_{10}2 = 0.3010$)

Options :

1. ✖ 15.72 joule

2. ✖ 157.2 joule

3. ✔ 1572 joule

4. ✖ 1.572 joule

Question Number : 62 Question Id : 1592075077 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The energy possessed by an object, by virtue of its motion is termed as

Options :

1. ✖ Potential Energy

2. ✔ Kinetic Energy

3. ✖ Gravitational Energy

4. ✖ Nuclear Energy

Question Number : 63 Question Id : 1592075078 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

At what speed the observer must move towards a stationary source so that the apparent frequency will be double the original frequency of the source? The velocity of sound is V.

Options :

1. ✔ V

2. ✖ $\frac{V}{2}$

3. ✖ $2V$

4. ✖ $\frac{V}{4}$

Question Number : 64 Question Id : 1592075079 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The displacement equation of a particle executes SHM is given by $y = a \sin \omega t + b \cos \omega t$, the resultant amplitude is

Options :

1. ✔ $(a^2 + b^2)^{1/2}$

2. ✖ $(a + b)$

3. ✖ $(a + b)^{1/2}$

4. ✖ Zero

Question Number : 65 Question Id : 1592075080 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The periodic time (T) of simple pendulum is observed for different lengths (L). If a graph of $\log_{10}L$ against $\log_{10}T$ is plotted, the slope of the graph will be

Options :

1. ✖ 1/2

2. ✖ -1/2

3. ✖ $(2)^{1/2}$

4. ✔ 2

Question Number : 66 Question Id : 1592075081 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The maximum velocity of a particle performing SHM is 0.12 m/sec, if its maximum acceleration is 0.48 m/sec^2, then its time period (sec) is

Options :

1. ✖ 1.54

2. ✖ 1.59

3. ✔ 1.57

4. ✖ 1.75

Question Number : 67 Question Id : 1592075082 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The minimum energy required to take out an electron from an alkali metal is called

Options :

1. ✖ Kinetic Energy

2. ✖ Potential Energy

3. ✖ Gibbs Free Energy

4. ✔ Work Function

Question Number : 68 Question Id : 1592075083 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

N_1 and N_2 be the number of atoms in the ground and excited states. Then the condition for population inversion is

Options :

1. ✖ $N_1 = N_2$

2. ✖ $N_1 > N_2$

3. ✔ $N_2 > N_1$

4. ✖ $N_2 = 0$

Question Number : 69 Question Id : 1592075084 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Two magnets have magnetic moments in the ratio 2:1. Their pole strengths are in the ratio 1:2. Then the ratio of their magnetic lengths is

Options :

1. ✖ 1:4

2. ✖ 1:1

3. ✖ 2:3

4. ✔ 4:1

Question Number : 70 Question Id : 1592075085 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The susceptibility of para magnetic material is

Options :

1. ✔ Positive and small

2. ✖ Positive and large

3. ✖ Negative

4. ✖ Zero

Question Number : 71 Question Id : 1592075086 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

There are three equal resistors, how many different combinations of these resisters are possible.

Options :

1. ✔ Four

2. ✖ Two

3. ✖ Three

4. ✖ Five

Question Number : 72 Question Id : 1592075087 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is the perfect diamagnetic?

Options :

1. ✖ Any conductor

2. ✖ P-Type semiconductor

3. ✖ N-Type semiconductor

4. ✔ Superconductor

Question Number : 73 Question Id : 1592075088 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The current in the PN junction diode during the reverse bias is the result of

Options :

1. ✖ Majority carriers

2. ✔ Minority carriers

3.

✖ Both majority and minority carriers

4. ✖ Only electrons

Question Number : 74 Question Id : 1592075089 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following has maximum energy gap?

Options :

1. ✔ Insulators

2. ✖ Superconductors

3. ✖ Metals

4. ✖ Semiconductors

Question Number : 75 Question Id : 1592075090 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is true for Fermi energy level for p-type extrinsic semiconductor?

Options :

1. ✖ At middle of the band gap

2. ✔ Close to valence band

3. ✖ Close to conduction band

4. ✖ Fermi level does not exist

Chemistry

Section Id :	159207100
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	159207121
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 76 Question Id : 1592075091 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The values of Azimuthal and principal quantum numbers respectively for an electron that is present in 4d orbital

Options :

1. ✖ 1 and 4

2. ✖ 4 and 1

3. ✔ 2 and 4

4. ✖ 4 and 2

Question Number : 77 Question Id : 1592075092 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following molecule has ionic bonding?

Options :

1. ✖ CH_3Cl

2. ✖ CH_3OH

3. ✖ CO_2

4. ✔ MgO

Question Number : 78 Question Id : 1592075093 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the Oxidation number of carbon in formaldehyde?

Options :

1. ✖ -4

2. ✖ +4

3. ✔ 0

4. ✖ +2

Question Number : 79 Question Id : 1592075094 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Molarity of a solution containing 9 g of glucose (molar mass180)

in 500 g of water is

Options :

1. ✖ 0.5

2. ✔ 0.1

3. ✖ 0.2

4. ✖ 1.0

Question Number : 80 Question Id : 1592075095 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Prussian blue colloid is

Options :

1. ✖ As_2S_3

2. ✖ $Fe(OH)_3$

3. ✔ $KFe[Fe(CN)_6]$

4. ✖ $FeCl_3$

Question Number : 81 Question Id : 1592075096 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following anions is the strongest base?

Options :

1. ✔ ClO^-

2. ✖ ClO_2^-

3. ✖ ClO_3^-

4. ✖ ClO_4^-

Question Number : 82 Question Id : 1592075097 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The pH of 10^{-9} molar solution of HCl is

Options :

1. ✖ 9

2. ✖ -9

3. ✖ Between 7 & 8

4. ✔ Between 6 & 7

Question Number : 83 Question Id : 1592075098 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a Renewable energy source?

Options :

1. ✖ Petroleum

2. ✖ Coal

3. ✖ Natural gas

4. ✔ Wind mills

Question Number : 84 Question Id : 1592075099 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following gas is responsible for depletion of ozone layer in the atmosphere?

Options :

1. ✖ CH_2Cl_2

2. ✔ CF_2Cl_2

3. ✖ CH_2F_2

4. ✖ CO_2

Question Number : 85 Question Id : 1592075100 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The exhausted permutit is regenerated by percolating through it a solution of

Options :

1. ✖ Calcium chloride

2. ✖ Zinc chloride

3. ✔ Sodium chloride

4. ✖ Magnesium chloride

Question Number : 86 Question Id : 1592075101 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During reverse osmosis:

Options :

1. ✖ Dissolved salts are pushed out through semipermeable membrane

2. ✖ Only dissolved ionic salts are pushed out through the semipermeable membrane

3. ✔ Pure water is pushed out through semipermeable membrane

4. ✖ Both water and dissolved salts are pushed out through the semipermeable membrane

Question Number : 87 Question Id : 1592075102 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a weak electrolyte?

Options :

1. ✖ HCl

2. ✖ NaOH

3. ✔ CH_3COOH

4. ✖ H_2SO_4

Question Number : 88 Question Id : 1592075103 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When 2 amperes of current is passed through $CuSO_4$ solution for 10 minutes, the amount of Cu deposited is (Atomic weight of Cu = 63.5 g)

Options :

1. ✖ 3.94 g

2. ✔ 0.394 g

3. ✖ 0.788 g

4. ✖ 7.88 g

Question Number : 89 Question Id : 1592075104 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Composition of Nichrome alloy is

Options :

1. ✖ Ni:68%, Cu:27%, Fe:5%

2. ✔ Ni:78%, Cr:20%, Fe:2%

3. ✖ Ni:40%, Cu:60%

4. ✖ Al:95%, Cu:2%, Ni:1%

Question Number : 90 Question Id : 1592075105 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In the froth flotation method, pine oil

Options :

1. ✖ Increases the surface tension of the solution

2. ✖ Acts as a collector

3. ✖ Does not affect the surface tension of the solution

4. ✔ Decreases the surface tension of the solution

Question Number : 91 Question Id : 1592075106 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During electro chemical corrosion in acidic environment

Options :

1. ✔ Hydrogen evolution takes place

2. ✖ Oxygen evolution takes place

3. ✖ Oxygen absorption occurs

4. ✖ Hydrogen absorption takes place

Question Number : 92 Question Id : 1592075107 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The process of coating of Iron with Zinc metal is known as

Options :

1. ✔ Galvanizing

2. ✖

Sherardizing

3. ✖ Zincing

4. ✖ Tinning

Question Number : 93 Question Id : 1592075108 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Bakelite is prepared by the condensation polymerization of

Options :

1. ✔ Phenol and formaldehyde

2. ✖ Urea and formaldehyde

3. ✖ Phenol and acetaldehyde

4. ✖ Urea and acetone

Question Number : 94 Question Id : 1592075109 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The trade name of the polymer coated on non-stick utensils is

Options :

1. ✖ Dacron

2. ✖ Orlon

3. ✔ Teflon

4. ✖ Nylon

Question Number : 95 Question Id : 1592075110 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Octane number of a petrol that consists 20:80 mixture of n-heptane and 2,2,4-trimethyl pentane is

Options :

1. ✖ 100

2. ✖ Zero

3. ✔ 80

4. ✖ 20

Question Number : 96 Question Id : 1592075111 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Producer gas is a mixture of

Options :

1. ✖ $CO_2 + H_2$

2. ✔ $CO + N_2$

3. ✖ $CO + CH_4$

4. ✖ $CH_4 + H_2$

Question Number : 97 Question Id : 1592075112 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the following cell reaction

$$Fe + \underset{(a=1)}{Ni}^{2+} \longrightarrow \underset{(a=1)}{Fe}^{2+} + Ni$$

The EMF of the cell at 298 K is $(\overset{o}{E}_{Fe^{2+}/Fe} = -0.440\ V; \overset{o}{E}_{Ni^{2+}/Ni} = -0.250\ V)$

Options :

1. ✖ -0.190 V

2. ✔ + 0.190 V

3. ✖ + 0.690 V

4. ✖ – 0.690 V

Question Number : 98 Question Id : 1592075113 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In Hydrogen-Oxygen fuel cell, the reaction at the cathode is

Options :

1. ✔ $O_2(g) + 4H^+ + 4e^- \rightarrow 2H_2O$

2. ✖ $4H^+ + 4e^- \rightarrow 2H_2(g)$

3. ✖ $2H_2O \rightarrow O_2(g) + 4H^+ + 4e^-$

4. ✖ $2H_2(g) + 4OH^- \rightarrow 4H_2O(\ell) + 4e^-$

Question Number : 99 Question Id : 1592075114 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following statements is true about SMOG?

Options :

1. ✖ SMOG is derived from the fog

2. ✖ SMOG is derived from smoke

3. ✖ SMOG is derived from water vapour

4. ✔ SMOG is derived from both fog and smoke

Question Number : 100 Question Id : 1592075115 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What do BOD and COD stand for?

Options :

1. ✔ Biological Oxygen Demand and Chemical Oxygen Demand respectively

2. ✖ Chemical Oxygen Demand and Biological Oxygen Demand respectively

3. ✖ Botanical Oxygen Demand and Chemical Oxygen Demand respectively

4. ✖ Basic Oxygen Demand and Chemical Oxygen Demand respectively

Computer Science and Engineering

Section Id :	159207101
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	159207122
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 101 Question Id : 1592075116 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which statement best describes a Karnaugh map

Options :

1. ✔ It is simply a rearranged truth table

2. ✖ The Karnaugh map eliminates the need of using NAND and NOR gates

3. ✖ Variable complement can be eliminated using Karnaugh maps

4. ✖ A Karnaugh map can be used to replace Boolean rules

Question Number : 102 Question Id : 1592075117 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The number of distinct Boolean expressions for 4 variables is

Options :

1. ✖ 16

2. ✖ 256

3. ✖ 1024

4. ✔ 65536

Question Number : 103 Question Id : 1592075118 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An SR flip flop is converted to ____ flip flop by inserting an inverter between S&R and assigning a single input

Options :

1. ✖ Master Slave

2. ✖ T

3. ✖ JK

4. ✔ D

Question Number : 104 Question Id : 1592075119 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A Combinational circuit that converts the binary information from 2^n inputs to n outputs is

Options :

1. ✖ Decoder

2. ✖ Multiplexer

3. ✖ Half adder

4. ✔ Encoder

Question Number : 105 Question Id : 1592075120 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Convert the decimal number 41.6875 into binary

Options :

1. ✖ 101001.0111000111101

2. ✖ 101001.111000111101

3. ✖ 101001.1101

4. ✔ 101001.1011

Question Number : 106 Question Id : 1592075121 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find the 4's complement of a number 12302 (base 4)

Options :

1. ✖ 32002

2. ✖ 32003

3. ✔ 21032

4. ✖ 21031

Question Number : 107 Question Id : 1592075122 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many gates would be required to implement the following Boolean expression after simplification?

XY + X(X+Z) + Y(X+Z)

Options :

1. ✖ 1

2. ✔ 2

3. ✖

4

4. ✖ 8

Question Number : 108 Question Id : 1592075123 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The logical expression $Y = A + \bar{A}\,B$ is equivalent to

Options :

1. ✖ Y=AB

2. ✖ $Y = \bar{A} + B$

3. ✖ $Y = \bar{A}\,B$

4. ✔ Y=A + B

Question Number : 109 Question Id : 1592075124 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The number of selection inputs required for a 64 x 1 Multiplexer (Mux) are

Options :

1. ✖ 5

2. ✔ 6

3. ✖ 8

4. ✖ 4

Question Number : 110 Question Id : 1592075125 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The size of main memory is 32K x 16 bits. The number of address lines are

Options :

1. ✖ 16

2. ✔ 15

3. ✖ 14

4. ✖ 13

Question Number : 111 Question Id : 1592075126 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The 8086 fetches instruction one after another from _____ of memory

Options :

1. ✖ Instruction pointer

2. ✖ Extra segment

3. ✔ Code segment

4. ✖ Stack segment

Question Number : 112 Question Id : 1592075127 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In 8086 the overflow flag is set when_____

Options :

1. ✖ Subtraction

2. ✔ Signed numbers go out of their range after an arithmetic operation.

3. ✖ The sum is more than 16 bits.

4. ✖ Carry and sign flags are set.

Question Number : 113 Question Id : 1592075128 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The Pin of minimum mode AD0-AD15 has _____ data bus

Options :

1. ✔ 16 bit

2. ✖ 8 bit

3. ✖ 32 bit

4. ✖ 20 bit

Question Number : 114 Question Id : 1592075129 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A _____ instruction at the end of interrupt service program takes the execution back to the interrupted program.

Options :

1. ✖ Exit

2. ✔ Return

3. ✖ Halt

4. ✖ Back

Question Number : 115 Question Id : 1592075130 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following represents the definition of the JNP instruction in 8086 microprocessor?

Options :

1. ✖ JUMP IF CF=0

2. ✖ JUMP IF CF=1

3. ✔ JUMP IF PF=0

4. ✖ JUMP IF PF=1

Question Number : 116 Question Id : 1592075131 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Given the following instruction:
MOV AX , 02H [BX] [SI]
Consider the following data:
DS = 3290H ; SS = 1004H ; ES= 4237H ; BX= 1100H ; SI= 1101H
Find the effective address location for the given instruction.

Options :

1. ✖ 4447E H

2. ✖ A234F H

3. ✖ 35254 H

4. ✔ 34B03 H

Question Number : 117 Question Id : 1592075132 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The instruction that is used to convert the result of the addition of two packed BCD numbers to a valid BCD number is _____

Options :

1. ✖ DAS

2. ✔ DAA

3. ✖ AAA

4. ✖ AAS

Question Number : 118 Question Id : 1592075133 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the following 8086 assembly language program:

```
MOV AX, BB11H
MOV CX,1122H
ADD AX,CX
HLT
```

The result of this program is _____

Options :

1. ✖ AX=BB11H

2. ✖ CX=BB11H

3. ✖ CX=CC33H

4. ✔ AX=CC33H

Question Number : 119 Question Id : 1592075134 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which mode do all the Ports of the 8255 PPI work as Input-Output units for data transfer?

Options :

1. ✖ BSR mode

2. ✖ Mode 1 of I/O mode

3. ✔ Mode 0 of I/O mode

4. ✖ Mode 2 of I/O mode

Question Number : 120 Question Id : 1592075135 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which chip is used for AD & DA converters in 8086 processor?

Options :

1. ✔ 8251

2. ✖ 8255

3. ✖ 8259

4. ✖ 8254

Question Number : 121 Question Id : 1592075136 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The_____ contains electronic circuits for communication and controlling the transfer of information between the computer and the peripheral devices.

Options :

1. ✖ Input Processor

2. ✖ Output Processor

3. ✔ Input-Output Processor

4. ✖ Hardware

Question Number : 122 Question Id : 1592075137 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The representation of 4385 in BCD requires _____ flip-flops.

Options :

1. ✖ 4

2. ✔ 16

3. ✖ 8

4. ✖ 2

Question Number : 123 Question Id : 1592075138 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following does not come under basic computer instruction format?

Options :

1. ✖ Memory Reference Instruction

2. ✖ Register Reference Instruction

3. ✔ Device Reference Instruction

4. ✖ Input-Output Instruction

Question Number : 124 Question Id : 1592075139 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The following register transfer indicates which addressing mode?
AC ←M[ADR + XR]

Options :

1. ✖ Direct address

2. ✖ Relative address

3. ✖ Indirect address

4. ✔ Index addressing

Question Number : 125 Question Id : 1592075140 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The_____ circulates the bits of the register around the two ends without loss of information.

Options :

1. ✔ Rotate operation

2. ✖ Logical shift

3. ✖ Arithmetic shift

4. ✖ Parity shift

Question Number : 126 Question Id : 1592075141 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In associative memory, which register will provide a mask for choosing a particular field or key in the argument word.

Options :

1. ✖ Argument Register

2. ✔ Key Register

3. ✖ Status Register

4. ✖ Accumulator Register

Question Number : 127 Question Id : 1592075142 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If the active portions of the program and data are placed in a fast small memory, the average memory access time can be reduced, thus reducing the total execution time of the program. Such a fast small memory is referred to as a

Options :

1. ✖ Associative Memory

2. ✖ Main Memory

3. ✔ Cache Memory

4. ✖ Auxiliary Memory

Question Number : 128 Question Id : 1592075143 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When a program starts execution, one or more pages are transferred into main memory and the page table is set to indicate their position. The program is executed from main memory until it attempts to reference a page that is still in auxiliary memory. This condition is called _____.

Options :

1. ✖ Address fault

2. ✖ Memory fault

3. ✖ Frame fault

4. ✔ Page fault

Question Number : 129 Question Id : 1592075144 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The transfer of data between a fast storage device such as magnetic disk and memory is often limited by the speed of the CPU. Removing the CPU from the path and letting the peripheral device manage the memory buses directly. This technique is known as

Options :

1. ✔ DMA

2. ✖ DTA

3. ✖ CMA

4. ✖ AMA

Question Number : 130 Question Id : 1592075145 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

As a part of interrupt initiated I/O, the source that interrupts supplies the branch information to the computer. This information is called the _____

Options :

1. ✖ Priority interrupt

2. ✔ Vectored interrupt

3. ✖ Scalar interrupt

4. ✖ Nonscalar interrupt

Question Number : 131 Question Id : 1592075146 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the relationship among the datatypes of C language with respect to the memory requirement?

Options :

1. ✔ char ≤ int ≤ float ≤ double

2. ✖ char ≥ int ≥ float≥ double

3. ✖ int ≥ char ≥ float≥ double

4. ✖ int ≤ char ≤ float ≤ double

Question Number : 132 Question Id : 1592075147 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is a ternary operator in C language?

Options :

1. ✖ ++

2. ✖ --

3. ?: ✔

4. :: ✖

Question Number : 133 Question Id : 1592075148 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following operator is having Right to Left Associativity?

Options :

1. += ✔

2. >= ✖

3. <= ✖

4. % ✖

Question Number : 134 Question Id : 1592075149 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

This program prints 45, what is the statement to be written at the 'MISSINGPART' part of the program.

```
#include<stdio.h>
int main()
{
   int a=45,*p1,**p2,***p3,***p4;
   p1=&a;
   p2=&p1;
   p3=&p2;
   printf("%d", MISSINGPART);
      return 0;
}
```

Options :

1. ✔ ***P3

2. ✖ **p3

3. ✖ *p3

4. ✖ p3

Question Number : 135 Question Id : 1592075150 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the output of the following code?

```
#include<stdio.h>
int main()
{
  int a=100;
    if(a>10)
        printf("Delhi ");
    if(a>20)
        printf("Mumbai ");
    else
       printf("Hyderabad ");
 return 0;
}
```

Options :

1. ✖ Delhi

2. ✖ Delhi Hyderabad

3. ✔ Delhi Mumbai

4. ✖ Hyderabad

Question Number : 136 Question Id : 1592075151 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

This program prints the character 'C', what is the statement to be written at the 'MISSING STATEMENT' part of the program.

```
#include<stdio.h>
int main()
{
   char a[4]={'A', 'B', 'C', 'D'};
   char *p1;
   MISSING STATEMENT
   printf("%c",p1[2]);
   return 0;
}
```

Options :

1. ✔ `p1=a;`

2. ✖ `a=p1;`

3. ✖ `&p1=&a1;`

4. ✖ `*p1=*a1`

Question Number : 137 Question Id : 1592075152 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

By using the statement:
int a[2][3];
If we assume that
(i) int occupies 2 bytes
(ii) index in the memory is made with column major form, and
(iii) Starting address of this array is 1000.
Then what is the address of a[1][1]

Options :

1. ✖ 1002

2. ✖ 1004

3. ✔ 1006

4. ✖ 1008

Question Number : 138 Question Id : 1592075153 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The member variable of a structure is accessed by using

Options :

1. ✔ dot (.) operator

2. ✖ arrow (→) operator

3. ✖ asterisk (*) operator

4. ✖ ampersand(&) operator

Question Number : 139 Question Id : 1592075154 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is not an application of a stack?

Options :

1. ✖ Balancing symbols

2. ✖ Evaluation of a postfix expression

3. ✖ Recursion

4. ✔ Job scheduling

Question Number : 140 Question Id : 1592075155 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Time complexity of the following code segment is

```
for (i=1; i ≤ n; i=i*2)

print("If hard work is your weapon then success is your slave")
```

Options :

1. ✖ O(n)

2. ✔ O (log n)

3. ✖ O(1)

4. ✖ O(2n)

Question Number : 141 Question Id : 1592075156 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is not true?

Options :

1. ✖ A tree is a connected graph without cycles

2. ✖

Every binary tree with 6 nodes contains at least two leaf nodes

A tree with 200 nodes contains 199 edges

3. ✖

Every node in a rooted binary tree has a parent

4. ✔

Question Number : 142 Question Id : 1592075157 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following sorting algorithm has highest Average-case time complexity?

Options :

Merge Sort

1. ✖

Quick Sort

2. ✖

Bubble Sort

3. ✔

Heap Sort

4. ✖

Question Number : 143 Question Id : 1592075158 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following sorting algorithms efficiently sorts the array A[1...n] in ascending order.

Options :

1. ✖ Insertion sort

2. ✔ Merge sort

3. ✖ Selection sort

4. ✖ Bubble sort

Question Number : 144 Question Id : 1592075159 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is true about the sequential search to search in an array of n elements?

Options :

1. ✖ Best-case running time of sequential search is O(1)

2. ✔ Best-case running time of sequential search is O(n)

3. ✖ Worst-case running time of sequential search is $O(n^2)$

4. ✖ Worst-case running time of sequential search is O(log n)

Question Number : 145 Question Id : 1592075160 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is a recurrence for the worst-case running time of binary search?

Options :

1. ✖ T(n)=T(n-1)+1

2. ✖ T(n)=T(log n)+c

3. ✔ T(n)=T(n/2)+c

4. ✖ T(n)=T(n/4)+c

Question Number : 146 Question Id : 1592075161 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The protocol data unit(PDU) for the application layer in the Internet stack is

Options :

1. ✖ Segment

2. ✖ Datagram

3. ✔ Message

4. ✖ Frame

Question Number : 147 Question Id : 1592075162 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following transport layer protocols is used to support electronic mail?

Options :

1. ✖ SMTP

2. ✖ IP

3. ✔ TCP

4.

✖ UDP

Question Number : 148 Question Id : 1592075163 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many bits are allocated for network id (NID) and host id(HID) in the IP address 25.193.155.233?

Options :

1. ✖ 24 bit for NID, 8 bits for HID

2. ✔ 8 bit for NID, 24 bits for HID

3. ✖ 16 bit for NID, 16 bits for HID

4. ✖ 2 bit for NID, 8 bits for HID

Question Number : 149 Question Id : 1592075164 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____ is a connection-less and unreliable transport protocol.

Options :

1.

✖ TCP

2. ✖ IP

3. ✔ UDP

4. ✖ HTTP

Question Number : 150 Question Id : 1592075165 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

MAC address is a _____bit number

Options :

1. ✖ 24

2. ✖ 36

3. ✔ 48

4. ✖ 42

Question Number : 151 Question Id : 1592075166 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The address resolution protocol (ARP) is used for:

Options :

1. ✖ Finding the IP address from the DNS

2. ✖ Finding the IP address of the default gateway

3. ✖ Finding the IP address that corresponds to a MAC address

4. ✔ Finding the MAC address that corresponds to an IP address

Question Number : 152 Question Id : 1592075167 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Packets of the same session may be routed through different paths in:

Options :

1. ✖ TCP, but not UDP

2. ✔ TCP and UDP

3. ✖ UDP, but not TCP

4. ✖ Neither TCP nor UDP

Question Number : 153 Question Id : 1592075168 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The topology that uses a single cable to connect the network nodes is

Options :

1. ✔ Bus

2. ✖ Ring

3. ✖ Star

4. ✖ Mesh

Question Number : 154 Question Id : 1592075169 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The unix command that prints newline, word count and byte counts of each file is

Options :

1. ✖ ls

2. ✖ grep

3. ✖ uniq

4. ✔ wc

Question Number : 155 Question Id : 1592075170 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The unix command that prints lines matching a pattern is

Options :

1. ✔ grep

2. ✖ tee

3. ✖ tail

4.

head

Question Number : 156 Question Id : 1592075171 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following types of operating system service keeps track of which users use how much and what kinds of computer resources?

Options :

1. User Interface

2. Program Execution

3. Resource Allocation

4. Accounting

Question Number : 157 Question Id : 1592075172 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____provide an interface to the services made available by an operating system.

Options :

1.

✖ Protection and Security

2. ✔ System Calls

3. ✖ Communications

4. ✖ I/O Operations

Question Number : 158 Question Id : 1592075173 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The processes that are residing in main memory and are ready and waiting to execute are kept on a list called the_____.

Options :

1. ✖ Job Queue

2. ✖ Device Queue

3. ✔ Ready Queue

4. ✖ Pool Queue

Question Number : 159 Question Id : 1592075174 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the table given below and find the average waiting time result for Non-preemptive SJF scheduling algorithm.

Process	Arrival Time	Burst Time
P1	0	8
P2	1	4
P3	2	9
P4	3	5

Options :

1. ✔ 7.75 ms

2. ✖ 6.5 ms

3. ✖ 6.26 ms

4. ✖ 7.38 ms

Question Number : 160 Question Id : 1592075175 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is not shared by threads in multi-threaded process?

Options :

1. ✖ Code

2. ✖ Data

3. ✔ Stack

4. ✖ File

Question Number : 161 Question Id : 1592075176 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When only a single resource of each type is available, the deadlock can be detected by using variation of resource allocation graph. This variation can be constructed by eliminating the resources and collapsing the associated edges. This new variation of resource allocation graph is known as

Options :

1. ✖ Planar graph

2. ✖ Bounded graph

3. ✖ Resource allocation graph

4. ✔ Wait-for-graph

Question Number : 162 Question Id : 1592075177 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

To get rid of external fragmentation problem, it is desirable to relocate (or shuffle) some or all portions of the memory in order to place all the free holes together at one end of memory to make one large hole. This technique of reforming the storage is termed as_____.

Options :

1. ✖ starvation

2. ✖ aging

3. ✔ compaction

4. ✖ swapping

Question Number : 163 Question Id : 1592075178 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

To determine how demand paging significantly affects the performance of a computer system, we compute the effective access time (EAT) for a demand-paged memory. The effective memory access time can be computed as follows:

[Where t_{pfh} means page fault handling time, ma means memory access time and p means page fault]

Options :

1. ✖ $EAT = (1+p) \times ma + p - t_{pfh}$

2. ✖ $EAT = (1+p) \times ma - p \times t_{pfh}$

3. ✔ $EAT = (1-p) \times ma + p \times t_{pfh}$

4. ✖ $EAT = (1.5-p) + ma + p \times t_{pfh}$

Question Number : 164 Question Id : 1592075179 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Consider the following page reference string: 1, 2, 3, 4, 2, 1, 5, 6, 2, 1, 2, 3, 7, 6, 3, 2, 1, 2, 3, 6 and frame size is three.

How many page faults would occur for the LRU replacement algorithm?

Options :

1. ✔ 15

2. ✖ 11

3. ✖ 10

4. ✖ 16

Question Number : 165 Question Id : 1592075180 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Suppose that a disk drive has 5000 cylinders, numbered 0 to 4999. The drive is currently serving a request at cylinder 143, and the previous request was at cylinder 125.
The queue of pending requests is: 86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130.
Compute the total distance moved in serving all the pending requests as per SCAN disk scheduling algorithm is:

Options :

1. ✖ 2419 cylinders

2. ✖ 3319 cylinders

3. ✖ 9985 cylinders

4. ✔ 9769 cylinders

Question Number : 166 Question Id : 1592075181 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The highest level of data abstraction that describes only a part of entire database is

Options :

1. ✖ Physical Level

2. ✖ Logical Level

3. ✔ View Level

4. ✖ Abstract Level

Question Number : 167 Question Id : 1592075182 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The constraint that specifies the number of entities to which another entity can be associated via a relationship set in E-R model is referred as

Options :

1. ✔ Mapping cardinality

2. ✖ Entity integrity

3. ✖ Domain integrity

4. ✖ Assertion

Question Number : 168 Question Id : 1592075183 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

An attribute "Address" is divided into Street, City, state, Zip and Country. The attribute "Address" is referred as

Options :

1. ✖ Single valued attribute

2. ✖ Multivalued attribute

3. ✔ Composite attribute

4. ✖ Derived attribute

Question Number : 169 Question Id : 1592075184 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The relationship associating the weak entity set with the identifying set is called

Options :

1. ✖ Partial entity set

2. ✔ Identifying relationship

3. ✖ Aggregation

4. ✖ IS-A relationship

Question Number : 170 Question Id : 1592075185 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The generalization constraint that states that the same entity may belong to more than one lower level entity sets within single generalization is known as

Options :

1. ✔ Overlapping

2. ✖

Disjoint

3. ✖ User-defined

4. ✖ Condition-defined

Question Number : 171 Question Id : 1592075186 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One of the following operators in SQL is used for pattern matching

Options :

1. ✖ Between

2. ✖ Exists

3. ✔ Like

4. ✖ Average

Question Number : 172 Question Id : 1592075187 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The set of possible values for a given attribute is said to be its

Options :

1. ✖ Degree

2. ✖ Cardinality

3. ✖ Tuple

4. ✔ Domain

Question Number : 173 Question Id : 1592075188 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The integrity constraints that ensures that a value that appears in one relation for a given set of attributes also appears for a certain attributes of another relation is referred as

Options :

1. ✖ Domain integrity

2. ✖ Entity integrity

3. ✔

Referential integrity

4. ✖ Not null

Question Number : 174 Question Id : 1592075189 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The set of statements that are executed automatically as a side effect of a modification to the database is a

Options :

1. ✖ Function

2. ✖ Procedure

3. ✖ Package

4. ✔ Trigger

Question Number : 175 Question Id : 1592075190 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A relation which is in 2nd Normal form and does not contain transitive dependency is in which normal form?

Options :

1. ✖ 2NF

2. ✔ 3NF

3. ✖ 4NF

4. ✖ BCNF

Question Number : 176 Question Id : 1592075191 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How classes and structures in C++ differ

Options :

1. ✖ In Structures, members are private by default whereas, in Classes, they are public by default

2. ✔ In Structures, members are public by default whereas, in Classes, they are private by default

3. ✖ Structures by default hide every member whereas classes do not

4. ✖ Classes cannot have private members whereas Structures can have

Question Number : 177 Question Id : 1592075192 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following explains Polymorphism?

Options :

1. ✖ int abc(int, int); float abc1(float, float);

2. ✖ int abc(int); int abc(int);

3. ✖ int abc(); int new abc();

4. ✔ int abc(float); float abc(int, int, char);

Question Number : 178 Question Id : 1592075193 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How do access specifiers in Class help in Abstraction?

Options :

1. ✖ They help in keeping things together

2. ✖ They do not help in any way

3. ✔ Abstraction is used to hide certain functionality

4. ✖ Abstraction concept is not used in classes

Question Number : 179 Question Id : 1592075194 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following class allows one to declare only one object of it

Options :

1. ✖ Abstract class

2. ✖ Virtual class

3. ✔ Singleton class

4. ✖ Friend class

Question Number : 180 Question Id : 1592075195 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is correct?

Options :

1. ✔ Derived class pointer object cannot point to a base class object

2. ✖ Base class pointer object cannot point to a derived class object

3. ✖ A derived class cannot have pointer objects

4. ✖ A base class cannot have pointer objects

Question Number : 181 Question Id : 1592075196 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Out of the following, which is NOT a member of the class

Options :

1. ✖ Virtual function

2. ✔ Friend function

3. ✖ Constant function

4. ✖ Static function

Question Number : 182 Question Id : 1592075197 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Why references are different from pointers

Options :

1. ✖ A reference cannot be made null

2. ✖ No extra operator is needed for dereferencing of a reference

3. ✔ A reference cannot be changed once initialized

4. ✖ Pointer is static while reference is dynamic

Question Number : 183 Question Id : 1592075198 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following approach is used by C++

Options :

1. ✔ Bottom-up

2. ✖ Top-down

3. ✖ Left-right

4. ✖ Right-left

Question Number : 184 Question Id : 1592075199 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which concept is used to implement late binding?

Options :

1. ✔ Virtual functions

2. ✖ Operator functions

3. ✖ Constant functions

4. ✖ Static functions

Question Number : 185 Question Id : 1592075200 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which one of the following is NOT a possible state for a pointer?

Options :

1. ✖ Holding the address of the specified object

2. ✖ Dangling

3. ✖ Zero

4. ✔ Point to a type

Question Number : 186 Question Id : 1592075201 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the output of the following code?

```
int a=23;
char b='y';
system.out.print("b");
system.out.print(a);
```

Options :

1. ✖ Throws exception

2. ✖ 23 y

3. ✖ y 23

4. ✔ b 23

Question Number : 187 Question Id : 1592075202 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Find the output of the following code:

```
public class Solution {
    public static void main(String[] args){
            byte x = 127;
            x++;
            x++;
            System.out.print(x);
    }
}
```

Options :

1. ✖ 3

2. ✔ -127

3. ✖ 127

4. ✖ 129

Question Number : 188 Question Id : 1592075203 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

When an array is passed to a method, what does the method receive

Options :

1. ✖ A copy of the array

2. ✖ Length of the array

3. ✔ A reference of the array

4. ✖ Null value

Question Number : 189 Question Id : 1592075204 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which is the keyword that makes a variable belong to a class, rather than being defined for each instance of the class.

Options :

1. ✔ Static

2. ✖ Final

3. ✖ Abstract

4. ✖ Try

Question Number : 190 Question Id : 1592075205 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What is the return type of constructor of a class?

Options :

1. ✖ int

2. ✖ void

3. ✖ string

4. ✔ No return type

Question Number : 191 Question Id : 1592075206 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A throw statement _____ invokes an exception

Options :

1. ✔ Explicitly

2. ✖ Implicitly

3. ✖ Never

4. ✖ Randomly

Question Number : 192 Question Id : 1592075207 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

```
class Parent {
    final public void display() {
        System.out.println("Parent class display() called");
    }
}

class Child extends Parent {
    public void display() {
        System.out.println("Child class display() called");
    }
}

class Main {
    public static void main(String[] args) {
        Child c = new Child();;
        c.display();
    }
}
```

Options :

1. ✖ Runtime error

2. ✔ Compiler error

3. ✖ Parent class display() called

4. ✖ Child class display() called

Question Number : 193 Question Id : 1592075208 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is true about interfaces in java?

Options :

1. ✔ An interface can contain following type of members: public, static, final fields (i.e., constants), default and static methods with bodies.

2. ✖ An instance of interface can be created.

3. ✖ A class can implement multiple interfaces.

4. ✖ Many classes can implement the same interface.

Question Number : 194 Question Id : 1592075209 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Predict the output of following Java program.

```
class FORLOOP {
   public static void main(String[] args) {
    for(int i = 0; 0; i++)
    {
       System.out.println("Hello");
       break;
    }
   }
}
```

Options :

1. ✖ Hello

2. ✖ 0

3. ✖ Runtime error

4. ✔ Compiler error

Question Number : 195 Question Id : 1592075210 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The concept of 'threads' in java is used for enabling the entire environment to be_____

Options :

1. ✖ Symmetric

2. ✖ Asymmetric

3. ✔ Asynchronous

4. ✖ Synchronous

Question Number : 196 Question Id : 1592075211 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In HTML, _____ allows to present document in multiple views.

Options :

1. ✖ Tfoot

2. ✔ Frames

3. ✖ Table

4. ✖ Head

Question Number : 197 Question Id : 1592075212 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

 and tags in HTML displays

Options :

1. ✔ Bulleted text on separate line

2. ✖ Circular bullets

3. ✖ Solid round bullets

Squared bullets.

4. ✖

Question Number : 198 Question Id : 1592075213 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One of the constants starts with double under score (__) in PHP

Options :

1. ✖ Default constants

2. ✖ User defined constants

3. ✖ Inbuilt constants

4. ✔ Magic constants

Question Number : 199 Question Id : 1592075214 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

One of the following is not a feature of JavaScript

Options :

1.

JavaScript is light weight and cross platform

2. JavaScript can handle date and time manipulation

3. JavaScript can perform Form validation

4. Compiler is needed in JavaScript

Question Number : 200 Question Id : 1592075215 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What will be the output of the following code snippet

```
<script type="text/javascript" language="javascript">

var a = "Engineering";
var result = a.substring(3, 6);
document.write(result);

</script>
```

Options :

1. gine

2. gin

3. ✖ inee

4. ✔ ine