Andhra Pradesh State Council of 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 06th May 2025 Shift 1
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Computer Science and Engineering

Group Number :	1
Group Id :	89040173
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Show Attended Group? :	No
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Mathematics

Section Id :	890401283
Section Number :	1
Section type :	Online

Question Number : 1 Question Id : 89040114413 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the matrix $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$, then which of the following is true?

Options :

1. ✖ *The matrix is invertible*

2. ✔ *The matrix is singular*

3. ✖ The matrix is diagonalizable

4. ✖ The matrix is symmetric.

Question Number : 2 Question Id : 89040114414 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$, and the determinant of A is 5, then determinant of the matrix 2A is

Options :

1. ✖ 10

2. ✔ 20

3. ✖ 5

4. ✖ 25

Question Number : 3 Question Id : 89040114415 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If the matrix A is of order 3x3 and the system of equations AX = B has a unique solution,

what can be concluded about the determinant of A?

Options :

1. ✖ The determinant of A is zero

2. ✔ The determinant of A is non-zero

3. ✖ The determinant of A must be 1 only

4. ✖ The determinant of A cannot be negative

Question Number : 4 Question Id : 89040114416 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $A = \begin{bmatrix} x & 3 \\ 2 & 4 \end{bmatrix}$ and $A^{-1} = \begin{bmatrix} -2 & 1.5 \\ 1 & -0.5 \end{bmatrix}$ then the value of x is

Options :

1. ✖ -2

2. ✔ 1

3. ✖ 1.5

4. ✖ -0.5

Question Number : 5 Question Id : 89040114417 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$, then $(AB)^T =$

Options :

1. ✖ $\begin{bmatrix} 0 & 0 \\ 3 & 4 \end{bmatrix}$

2. ✖ $\begin{bmatrix} 0 & 0 \\ 3 & 7 \end{bmatrix}$

3. ✔ $\begin{bmatrix} 3 & 7 \\ 0 & 0 \end{bmatrix}$

4. ✖ $\begin{bmatrix} 3 & 6 \\ 0 & 0 \end{bmatrix}$

Question Number : 6 Question Id : 89040114418 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\dfrac{2x+5}{(x-1)(x+3)} = \dfrac{A}{(x-1)} + \dfrac{B}{(x+3)}$ then $A+B =$

Options :

1. ✖ -2

2. ✔ 2

3. ✖ 1

4. ✖ -1

Question Number : 7 Question Id : 89040114419 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\dfrac{3x-1}{(x-1)(x-2)(x-3)} = \dfrac{A}{(x-1)} + \dfrac{B}{(x-2)} + \dfrac{C}{(x-3)}$ then the values of (A, B, C) are

Options :

1. ✔ $(1, -5, 4)$

2. ✘ $(1, 5, 4)$

3. ✘ $(4, 5, 1)$

4. ✘ $(1, 4, 5)$

Question Number : 8 Question Id : 89040114420 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\sin\theta = \dfrac{3}{5}$, then $\cos\theta =$

Options :

1. ✘ $\dfrac{4}{5}$ *but not* $-\dfrac{4}{5}$

2. ✔ $-\dfrac{4}{5}$ *or* $\dfrac{4}{5}$

3. ✘ $-\dfrac{4}{5}$ *but not* $\dfrac{4}{5}$

4. ✘ $\dfrac{3}{5}$ *but not* $-\dfrac{3}{5}$

Question Number : 9 Question Id : 89040114421 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\cos\theta\,\csc\theta = -1$ *and* θ *lies in the second quadrant then* $\cos\theta =$

Options :

1. ✘

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

2. ✗ $\frac{\sqrt{2}}{2}$

3. ✔ $-\frac{\sqrt{2}}{2}$

4. ✗ $-\sqrt{2}$

Question Number : 10 Question Id : 89040114422 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $5 \sin \theta = 4$ then the value of $\frac{Cosec\,\theta - \cot\theta}{Cosec\,\theta + \cot\theta}$ is

Options :

1. ✗ -1/4

2. ✗ -1/2

3. ✗ 1/2

4. ✔ 1/4

Question Number : 11 Question Id : 89040114423 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

For real x and if $x + \frac{1}{x} = 2 \cos \theta$ then $\cos \theta$ is

Options :

1. ✔ ± 1

2. ✗ 1/2

3. ✖ 1

4. ✖ $\pm \dfrac{1}{2}$

Question Number : 12 Question Id : 89040114424 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$sin^6 \theta + cos^6 \theta + 3sin^2 \theta \, cos^2 \theta =$

Options :

1. ✖ 0

2. ✔ 1

3. ✖ 2

4. ✖ -1

Question Number : 13 Question Id : 89040114425 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The maximum value of $3 \cos \theta + 4 \sin \theta \ is$

Options :

1. ✖ 2

2. ✖ 4

3. ✔ 5

4. ✖ 1

Question Number : 14 Question Id : 89040114426 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $\sin 5x + \sin 3x + \sin x = 0$ then the value of x other than zero lying between $0 \leq x \leq \frac{\pi}{2}$ is

Options :

1. ✖ $\frac{\pi}{6}$

2. ✔ $\frac{\pi}{3}$

3. ✖ $\frac{\pi}{12}$

4. ✖ $\frac{\pi}{4}$

Question Number : 15 Question Id : 89040114427 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The general solution of the equation $tan^2 x = 1$ is

Options :

1. ✖ $n\pi + \frac{\pi}{4}$ only

2. ✔ $n\pi \pm \frac{\pi}{4}$

3. ✖ $2n\pi \pm \frac{\pi}{4}$

4. ✖ $n\pi - \frac{\pi}{4}$ only

Question Number : 16 Question Id : 89040114428 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of $\cos\dfrac{5\pi}{17} + \cos\dfrac{7\pi}{17} + 2\cos\dfrac{11\pi}{17}\cos\dfrac{\pi}{17}$ is

Options :

1. ✔   0

2. ✘   1

3. ✘ -1

4. ✘   1/2

Question Number : 17 Question Id : 89040114429 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. ✘ $\dfrac{5}{\sqrt{34}}$

2. ✘ $-\dfrac{5}{\sqrt{34}}$

3. ✘ $-\dfrac{\sqrt{34}}{25}$

4. ✔ $\dfrac{\sqrt{34}}{5}$

Question Number : 18 Question Id : 89040114430 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The real part of $\dfrac{1+2i}{(2-i)^2}$ is

Options :

1. ✔ $-\dfrac{1}{5}$

2. ✖ $\dfrac{1}{5}$

3. ✖ $-\dfrac{2}{5}$

4. ✖ $\dfrac{2}{5}$

Question Number : 19 Question Id : 89040114431 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Modulus of the complex number $\dfrac{(1+i)^{10}}{(2i-4)^4}$ is equal to

Options :

1. ✔ $\dfrac{2}{25}$

2. ✖ $-\dfrac{2}{25}$

3. ✖ $\dfrac{1}{25}$

4. ✖ $-\dfrac{1}{25}$

Question Number : 20 Question Id : 89040114432 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In a circle with center O, a 6cm long chord is at a distance 4 cm from the center.

Then the length of diameter is

Options :

1. ✗ 5 cm

2. ✓ 10 cm

3. ✗ 15 cm

4. ✗ 8 cm

Question Number : 21 Question Id : 89040114433 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The length of the tangent from the point (5, 1) to the circle $x^2 + y^2 + 6x - 4y - 3 = 0$ is

Options :

1. ✗ 81

2. ✓ 7

3. ✗ 29

4. ✗ 21

Question Number : 22 Question Id : 89040114434 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If length of the tangent is 8 cm and the distance between the center of the circle and the

external point is 11 cm, then the area of the circle is

Options :

1. ✗ 100 cm

2. ✗ 197.14 cm

3. ✔ $179.14\ cm$

4. ✘ $110.14\ cm$

Question Number : 23 Question Id : 89040114435 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the parabola with focus (2, 0) and vertex (1, 0) is

Options :

1. ✘ $y^2 = 4x$

2. ✔ $y^2 = 4x - 4$

3. ✘ $y^2 = 4(x + 1)$

4. ✘ $y^2 = -4(x - 1)$

Question Number : 24 Question Id : 89040114436 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If (2,0) is the vertex and y-axis is the directrix of a parabola then its focus is

Options :

1. ✘ (2, 0)

2. ✘ (-2, 0)

3. ✔ (4, 0)

4. ✘ (-4, 0)

Question Number : 25 Question Id : 89040114437 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The *eccentricity of* the ellipse $16x^2 + 7y^2 = 112$ *is*

Options :

1. ✖ $\dfrac{4}{3}$

2. ✖ $\dfrac{7}{16}$

3. ✖ $\dfrac{3}{\sqrt{7}}$

4. ✔ $\dfrac{3}{4}$

Question Number : 26 Question Id : 89040114438 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of $\lim\limits_{n \to \infty} \dfrac{4x^3 - x + 1}{x^2 - 4x(1 - x^2)} =$

Options :

1. ✖ 0

2. ✔ 1

3. ✖ -1

4. ✖ ∞

Question Number : 27 Question Id : 89040114439 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of $\lim\limits_{x \to 1} \left(\frac{x^3 - 1}{x - 1} \right)$ is

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 3

4. ✖ Limit does not exist

Question Number : 28 Question Id : 89040114440 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The derivative of x^x with respective to x is

Options :

1. ✖ $x^x(x + logx)$

2. ✖ $x^x(x - logx)$

3. ✖ $x^x(1 - logx)$

4. ✔ $x^x(1 + logx)$

Question Number : 29 Question Id : 89040114441 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$\frac{d}{dx}\left(tan^{-1}\frac{x}{a}\right) =$

Options :

1. ✖ $\dfrac{a}{a^2-x^2}$

2. ✖ $\dfrac{1}{a^2+x^2}$

3. ✖ $\dfrac{1}{a^2-x^2}$

4. ✔ $\dfrac{a}{a^2+x^2}$

Question Number : 30 Question Id : 89040114442 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$$If \ \ y = \sqrt{sinx + \sqrt{sinx + \sqrt{sinx + ----\infty}}} \quad then \ \ \dfrac{dy}{dx} =$$

Options :

1. ✖ $\dfrac{cosx}{1-2y}$

2. ✖ $\dfrac{sinx}{1-2y}$

3. ✖ $\dfrac{-sinx}{1-2y}$

4. ✔ $\dfrac{-cosx}{1-2y}$

Question Number : 31 Question Id : 89040114443 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Slope of the normal to the curve $x^{2/3} + y^{2/3} = 2$ at the point $(1, 1)$ is

Options :

1. ✗ -1

2. ✓ 1

3. ✗ $1/2$

4. ✗ $-1/2$

Question Number : 32 Question Id : 89040114444 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The equation of the tangent to the curve $y = x^3$ at $(1, 1)$ is

Options :

1. ✗ $3x - y + 2 = 0$

2. ✗ $x - 10y - 50 = 0$

3. ✓ $3x - y - 2 = 0$

4. ✗ $x - 10y + 50 = 0$

Question Number : 33 Question Id : 89040114445 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

For what value of x, the function $2x^3 + 3x^2 - 36x + 10$ has minimum

Options :

1. ✗ -2

2. ✗ -3

3. ✓

2

4. ✖ 1

**Question Number : 34 Question Id : 89040114446 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes**

Correct Marks : 1 Wrong Marks : 0

If $z = x^2 - y^2$ then $\frac{1}{x}\frac{\partial z}{\partial x} + \frac{1}{y}\frac{\partial z}{\partial y} =$

Options :

1. ✖ 1

2. ✖ $2x + 2y$

3. ✔ 0

4. ✖ $2x - 2y$

**Question Number : 35 Question Id : 89040114447 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes**

Correct Marks : 1 Wrong Marks : 0

If $u = e^{xy}$, then the value of $\frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 u}{\partial y^2}$ at $(1, 1)$ is

Options :

1. ✖ e

2. ✔ $2e$

3. ✖ 1

4. ✖ 0

Question Number : 36 Question Id : 89040114448 Question Type : MCQ Option Shuffling : No

The value of $\int (\log \sec x) \tan x \ dx$ is

Options :

1. ✖ $\sec x + c$

2. ✖ $\log \sec x + c$

3. ✔ $\frac{1}{2} (\log \sec x)^2 + c$

4. ✖ $\log (\log \sec x)$

Question Number : 37 Question Id : 89040114449 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$\int \sin^2 x \ dx =$

Options :

1. ✖ $\frac{x}{2} + \frac{\sin 2x}{4} + c$

2. ✖ $\frac{x}{2} - \frac{\cos 2x}{4} + c$

3. ✖ $\frac{x}{2} + \frac{\cos 2x}{4} + c$

4. ✔ $\frac{x}{2} - \frac{\sin 2x}{4} + c$

Question Number : 38 Question Id : 89040114450 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$\int \frac{dx}{25-x^2} =$

Options :

1. ✖ $\frac{1}{5} log \left| \frac{x-5}{x+5} \right| + c$

2. ✖ $\frac{1}{5} log \left| \frac{x+5}{x-5} \right| + c$

3. ✔ $\frac{1}{10} log \left| \frac{5+x}{5-x} \right| + c$

4. ✖ $\frac{1}{10} log \left| \frac{5-x}{5+x} \right| + c$

Question Number : 39 Question Id : 89040114451 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The value of $\int_0^1 x(1-x)^9 \, dx$ is

Options :

1. ✔ $\frac{1}{110}$

2. ✖ $\frac{1}{120}$

3. ✖ $\frac{-1}{110}$

4. ✖ $\frac{-1}{120}$

Question Number : 40 Question Id : 89040114452 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$$\int_{-a}^{a} |x| \ dx \ =$$

Options :

1. ✖ a

2. ✖ $2a$

3. ✖ 0

4. ✔ a^2

Question Number : 41 Question Id : 89040114453 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

$$\int_{0}^{\pi/2} \frac{\cos 2x}{\sin x + \cos x} \ dx \ =$$

Options :

1. ✖ -1

2. ✔ 0

3. ✖ 1

4. ✖ $\dfrac{\pi}{2}$

Question Number : 42 Question Id : 89040114454 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The area bounded by the curve $y = 4x^2$, the x-axis, the line x=0 and the line x = 1 is

Options :

1. ✖ 2

2. ✗ 2/3

3. ✗ 1/3

4. ✓ 4/3

Question Number : 43 Question Id : 89040114455 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The RMS value of x^2 in $[0, 1]$ is

Options :

1. ✓ $\dfrac{1}{\sqrt{5}}$

2. ✗ $\dfrac{1}{5}$

3. ✗ $\dfrac{1}{\sqrt{3}}$

4. ✗ $\dfrac{1}{3}$

Question Number : 44 Question Id : 89040114456 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The degree of the differential equation $y' + y = \dfrac{5}{y'}$ is

Options :

1. ✗ 1

2. ✓ 2

3. ✖ 3

4. ✖ 4

Question Number : 45 Question Id : 89040114457 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The order of the differential equation whose general solution is y = a sin x + b cos x is

(where a and b are arbitrary constants)

Options :

1. ✔ 2

2. ✖ 4

3. ✖ 1

4. ✖ 3

Question Number : 46 Question Id : 89040114458 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The differential equation $\frac{dy}{dx} = -\left(\frac{x+y}{1+x^2}\right)$ is

Options :

1. ✖ of Variable separable form

2. ✔ First order Linear equation

3. ✖ Homogeneous

4. ✖ Exact differentia Equation

Question Number : 47 Question Id : 89040114459 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. ✖ $y = tanx + c$

2. ✔ $y = \tan(x + c)$

3. ✖ $y = tanx$

4. ✖ $y = -\tan(x + c)$

Question Number : 48 Question Id : 89040114460 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. ✖ $4xy = x^3 + 3$

2. ✔ $4xy = x^4 + 3$

3. ✖ $4xy = x^3 - 3$

4. ✖ $4xy = x^4 - 3$

Question Number : 49 Question Id : 89040114461 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The solution of the differential equation $\dfrac{d^3y}{dx^3} + 3\dfrac{d^2y}{dx^2} + 2\dfrac{dy}{dx} = 0$ is

Options :

1. ✔ $y = a + be^{-x} + ce^{-2x}$

2. ✖ $y = a + be^{x} + ce^{2x}$

3. ✖ $y = ae^{-x} + be^{-2x} + ce^{x}$

4. ✖ $y = a + be^{-2x} + ce^{-3x}$

Question Number : 50 Question Id : 89040114462 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The particular integral of $\dfrac{d^2y}{dx^2} + 3\dfrac{dy}{dx} + 2y = e^{-2x}$ is

Options :

1. ✔ $-xe^{-2x}$

2. ✖ xe^{-2x}

3. ✖ $-\dfrac{x}{2}e^{-2x}$

4. ✖ $\dfrac{x}{2}e^{-2x}$

Physics

Section Id :	890401284
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory

Question Number : 51 Question Id : 89040114463 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If we choose velocity V, length L and force F as fundamental physical quantities then how would you express power in terms of V, L and F ?

Options :

1. ✔ $F^1 L^0 V^1$

2. ✖ $F^1 L^{-1} V^1$

3. ✖ $F^1 L^{-1} V^2$

4. ✖ $F^1 L^{-2} V^3$

Question Number : 52 Question Id : 89040114464 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which pair of physical quantities have same dimensional formula

Options :

1. ✖ Torque and momentum

2. ✖ Surface tension and tension

3. ✔ Pressure and modulus of elasticity

4. ✖ Force constant and Planck's constant

Question Number : 53 Question Id : 89040114465 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If $A + B = C$ and $A^2 + B^2 = C^2$ then the angle between vectors A and B is

Options :

1. ✖ $0°$

2. ✖ $60°$

3. ✔ $90°$

4. ✖ $120°$

Question Number : 54 Question Id : 89040114466 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The area of rectangle with sides as $A = 3i + 4j$ and $B = i + 3j$ is

Options :

1. ✔ $5\sqrt{10}$ units

2. ✖ 10 units

3. ✖ $2\sqrt{10}$ units

4. ✖ $10\sqrt{5}$ units

Question Number : 55 Question Id : 89040114467 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If a pebble is thrown vertically upwards from the top of a tower with velocity 5 m/s. It strikes the ground after 3 seconds. With what velocity the pebble strikes the ground? (take $g = 10$ ms^{-2})

Options :

1. ✗ 10 m/s

2. ✗ 20 m/s

3. ✓ 25 m/s

4. ✗ 30 m/s

Question Number : 56 Question Id : 89040114468 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If a body released from the top of a tower of height H meter takes T seconds to reach the ground , where is the body at time T/2 seconds from the ground ?

Options :

1. ✗ $\dfrac{H}{2}$

2. ✗ $\dfrac{H}{4}$

3. ✓ $\dfrac{3H}{4}$

4. ✗ $\dfrac{2H}{3}$

Question Number : 57 Question Id : 89040114469 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A body starts from rest and travels with uniform acceleration. If the distance covered in first 2 seconds is 'x' and next 2 seconds is 'y', then

Options :

1. ✖ $y = x$

2. ✖ $y = 2x$

3. ✔ $y = 3x$

4. ✖ $y = 4x$

Question Number : 58 Question Id : 89040114470 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A juggler throws ball into air. He throws one whenever the previous one is at its highest point. How high do the balls rise if he throws n balls each second ?

Options :

1. ✔ $\dfrac{g}{2n^2}$

2. ✖ $\dfrac{g}{n}$

3. ✖ $\dfrac{g}{2n}$

4. ✖ $\dfrac{n^2}{g}$

Question Number : 59 Question Id : 89040114471 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A block of mass m is lying on an inclined plane. The coefficient of friction between the plane and the block is μ. The force required to move the block up the inclined plane will be

Options :

1. ✖ mg sin θ – μ mg cos θ

2. ✔ mg sin θ + μ mg cos θ

3. ✖ mg cos θ – μ mg sin θ

4. ✖ mg cos θ + μ mg sin θ

Question Number : 60 Question Id : 89040114472 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

The time taken by a body to slide down the smooth inclined plane is 4sec. The time taken by a body to slide 1/4ᵗʰ of the length of the plane is

Options :

1. ✖ 1 sec

2. ✔ 2 sec

3. ✖ 3 sec

4. ✖ 0.5 sec.

Question Number : 61 Question Id : 89040114473 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

A body of mass 2 Kg changes its velocity from (3 i - 4 j) m/s to (6j + 2 k) m/s. what is the change in kinetic energy of the body?

Options :

1. ✔ 15 J

2. ✘ 12 J

3. ✘ 18 J

4. ✘ 20 J

Question Number : 62 Question Id : 89040114474 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

At her maximum height a girl in a swing is 3m above the ground and at the lowest point she is 2m above the ground. Her maximum velocity is

Options :

1. ✘ $\sqrt{29.4}$ m/s

2. ✘ $\sqrt{9.8}$ m/s

3. ✔ $\sqrt{19.6}$ m/s

4. ✘ 9.8 m/s

Question Number : 63 Question Id : 89040114475 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

An engine delivers 1000 watt of power with 80% efficiency. The input power is

Options :

1. ✗ 800 W

2. ✗ 1000 W

3. ✓ 1250 W

4. ✗ 1500 W

Question Number : 64 Question Id : 89040114476 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If a seconds pendulum on the earth is taken to a planet whose gravity is half of the gravity on earth , its time period on that planet is

Options :

1. ✗ 2 sec

2. ✗ 4 sec

3. ✗ $4\sqrt{2}$ sec

4. ✓ $2\sqrt{2}$ sec

Question Number : 65 Question Id : 89040114477 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The amplitude of a simple harmonic oscillator is A. When the velocity of particle is half of its maximum velocity, then its position is at

Options :

1. ✗ $\frac{A}{2}$

2. ✗

$$\frac{\sqrt{3}\,A}{4}$$

3. ✗ $\dfrac{A}{4}$

4. ✓ $\dfrac{\sqrt{3}\,A}{2}$

Question Number : 66 Question Id : 89040114478 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The displacement of a particle executing SHM is $x = 3\sin 2t + 4\cos 2t$.

The amplitude of particle is

Options :

1. ✗ 7

2. ✗ 3

3. ✗ 4

4. ✓ 5

Question Number : 67 Question Id : 89040114479 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The beats are produced by two sound sources of same amplitude and of nearly

equal frequencies. The maximum intensity of beats will be _____ when

compared to that of one source is

Options :

1. ✗ Same

2. ✗ Double

3. ✔ Four times

4. ✘ Eight times

Question Number : 68 Question Id : 89040114480 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A siren emitting sound of frequency 800 Hz is going away from a static listener

with a speed of 30 m/s. Frequency of sound heard by the listener is

(Velocity of sound in air = 340 m/s)

Options :

1. ✘ 286.5 Hz

2. ✘ 418.2 Hz

3. ✔ 733.3 Hz

4. ✘ 644.5 Hz

Question Number : 69 Question Id : 89040114481 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

During the melting of a slab of ice at 273K at atmospheric pressure

Options :

1. ✘ Positive work is done by the ice-water system on the atmosphere

2. ✔ Positive work is done on the ice-water system by the atmosphere

3. ✘ Negative work is done on the ice-water system by the atmosphere

4. ✘ The internal energy of the ice-water system decreases

Question Number : 70 Question Id : 89040114482 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A gas is compressed at a constant pressure of 50 N/m^2 from a volume of 10 m^3 to a volume of 4 m^3. Energy of 100 J is then added to the gas by heating. Its internal energy is

Options :

1. ✔ Increases by 400 J

2. ✖ Increases by 200 J

3. ✖ Increases by 100 J

4. ✖ Decreases by 200 J

Question Number : 71 Question Id : 89040114483 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A vessel containing 10 liters of an ideal gas at a pressure of 760 mm of Hg is connected to an evacuated 9 liter vessel. The resultant pressure is

Options :

1. ✔ 400 mm of Hg

2. ✖ 1440 mm of Hg

3. ✖ 40 mm of Hg

4. ✖ 760 mm of Hg

Question Number : 72 Question Id : 89040114484 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A sealed glass jar is full of water. When its temperature is decreased to 0° C

Options :

1. ✖ The glass jar remains as it is with ice

2. ✖ The glass jar remains as it is with water

3. ✖ Glass jar contains half the amount of ice mixed with water

4. ✔ The glass jar breaks due to the formation of ice

Question Number : 73 Question Id : 89040114485 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A bubble rises from the bottom of a lake 90 m deep on reaching the surface,

its volume becomes (Atmospheric pressure is 10 m of water)

Options :

1. ✖ 4 times

2. ✖ 8 times

3. ✔ 10 times

4. ✖ 3 times

Question Number : 74 Question Id : 89040114486 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

An endoscope is employed by a physician to view the internal parts of a body organ.

It is based on the principle of

Options :

1. ✖ Refraction

2. ✖ Reflection

3. ✖ Dispersion

4. ✔ Total internal reflection

Question Number : 75 Question Id : 89040114487 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Light of wavelength 5000 A° falls on a sensitive plate with photo electric work

function of 1.9 eV. The kinetic energy of the emitted photoelectron will be

Options :

1. ✔ 0.58 eV

2. ✖ 2.48 eV

3. ✖ 1.24 eV

4. ✖ 1.16 eV

Chemistry

Section Id :	890401285
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	890401309

Question Number : 76 Question Id : 89040114488 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Consider the elements with atomic numbers Z = 1 to Z=20. The number of

elements with only one unpaired electron in their ground state is

Options :

1. ✖ 10

2. ✖ 6

3. ✔ 8

4. ✖ 12

Question Number : 77 Question Id : 89040114489 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Identify the orbital which has lobes not orienting on the axis

Options :

1. ✖ P_x

2. ✖ P_y

3. ✖ $d_{x^2-y^2}$

4. ✔ d_{yz}

Question Number : 78 Question Id : 89040114490 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

If n, l, m and s represent the symbols of quantum numbers, the impossible quantum number set for the electron in terms of n, l, m and s respectively is

Options :

1. ✔ 2, 0, -1, +1/2

2. ✘ 3, 0, 0, -1/2

3. ✘ 4, 1, +1, +1/2

4. ✘ 3, 2, -1, -1/2

Question Number : 79 Question Id : 89040114491 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Consider the elements with atomic numbers $Z = 8, 9, 11, 19$ and 20. The number of ionic compounds possible with the elements having these atomic numbers is

Options :

1. ✔ 6

2. ✘ 5

3. ✘ 10

4. ✘ 8

Question Number : 80 Question Id : 89040114492 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In which of the molecules lone pair, bond pair of electrons ratio is 2:3 ?

Options :

1. ✗ Cl_2

2. ✗ O_2

3. ✗ HCl

4. ✓ N_2

Question Number : 81 Question Id : 89040114493 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

How many moles of urea is present in 250 ml of 0.2 M solution of it?

Options :

1. ✗ 0.03

2. ✗ 0.04

3. ✓ 0.05

4. ✗ 0.06

Question Number : 82 Question Id : 89040114494 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

x ml of 0.1 M NaOH solution is diluted with distilled water to get 250 ml of 0.01 M solution.

The value of x (in ml) is

Options :

1. ✗ 12.5

2. ✓ 25

3. ✗ 37.5

4. ✗ 50

Question Number : 83 Question Id : 89040114495 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

3×10^{22} molecules of Na_2CO_3 (molecular weight = 106) present in 500 ml of solution.

The normality of the solution formed is (N = 6×10^{23} mol^{-1})

Options :

1. ✗ 0.1 N

2. ✓ 0.2 N

3. ✗ 0.4 N

4. ✗ 0.05 N

Question Number : 84 Question Id : 89040114496 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Identify the pair containing only Lewis acids

Options :

1. ✓ BF_3, NH_3

2. ✗ H^+, BF_3

3. ✗ F^-, H_2O

4. ✗ NH_4^+, NH_3

Question Number : 85 Question Id : 89040114497 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

4 g of NaOH is dissolved in 1.0 L solution. The pH of solution is

Options :

1. ✔ 13

2. ✖ 1

3. ✖ 12

4. ✖ 7.4

Question Number : 86 Question Id : 89040114498 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Number of coulombs corresponding to 1 mol of electrons approximately is equal to

Options :

1. ✖ 1.93×10^5

2. ✔ 9.65×10^4

3. ✖ 1.93×10^4

4. ✖ 9.65×10^5

Question Number : 87 Question Id : 89040114499 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Aqueous solution of which of the following does not act as electrolyte?

Options :

1. ✔ Urea

2. ✘ Copper Sulphate

3. ✘ Silver Nitrate

4. ✘ Sodium Chloride

Question Number : 88 Question Id : 89040114500 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The amount of silver (in mg) deposited when 9.65 coulombs of electricity is passed through

an aqueous solution of silver nitrate is (Ag=108 u) (1F=96500 C mol^{-1})

Options :

1. ✘ 16.2

2. ✘ 21.2

3. ✔ 10.8

4. ✘ 6.4

Question Number : 89 Question Id : 89040114501 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The standard electrode potentials of Zn, Ag and Cu are -0.76, +0.80 and +0.34 V

respectively. Identify the correct statement from the following.

Options :

1. ✘ Ag can oxidize Zn and Cu

2. ✗ Ag can reduce Zn^{2+} and Cu^{2+}

3. ✓ Zn can reduce Ag^+ and Cu^{2+}

4. ✗ Cu can oxidize Zn and Ag

Question Number : 90 Question Id : 89040114502 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In the removal of permanent hardness of water by permutit process, Na^+ ions of permutit

are exchanged with which ions of water ?

Options :

1. ✗ K^+, Ba^{2+}

2. ✗ Fe^{2+}, K^+

3. ✓ Ca^{2+}, Mg^{2+}

4. ✗ Zn^{2+}, Cu^{2+}

Question Number : 91 Question Id : 89040114503 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the degree of hardness (in ppm) of a sample containing 19 mg of $MgCl_2$ (Molecular Weight = 95) in 2 kg water sample?

(express it in terms of equivalents of $CaCO_3$)

Options :

1. ✓ 10

2. ✗ 20

3. ✗ 30

4. ✗ 40

Question Number : 92 Question Id : 89040114504 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Identify the pair of chlorides responsible for permanent hardness of water.

Options :

1. ✗ NaCl, KCl

2. ✗ $CaCl_2$, KCl

3. ✗ $AlCl_3$, $MgCl_2$

4. ✔ $MgCl_2$, $CaCl_2$

Question Number : 93 Question Id : 89040114505 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The cell formed in bent pipes is an example of

Options :

1. ✗ Concentration Cell

2. ✗ Composition Cell

3. ✔ Stress Cell

4. ✗ Electrolytic Cell

Question Number : 94 Question Id : 89040114506 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Tarnishing of silver is due to formation of

Options :

1. ✖ Its sulphate layer

2. ✖ Its nitrate layer

3. ✔ Its sulphide layer

4. ✖ Its chloride layer

Question Number : 95 Question Id : 89040114507 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a co-polymer?

Options :

1. ✖ Buna-S rubber

2. ✔ Neoprene rubber

3. ✖ Bakelite

4. ✖ Urea – Formaldehyde

Question Number : 96 Question Id : 89040114508 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The monomer involved in the formation of polystyrene is

Options :

1. ✖ $CH_2 = CH - Cl$

2. ✗ $CH_2 = CH - CN$

3. ✓ $CH_2 = CH - C_6H_5$

4. ✗ $CH_2 = CH - CH_3$

Question Number : 97 Question Id : 89040114509 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

We can overcome the undesirable properties of natural rubber by heating natural rubber with

Options :

1. ✗ Carbon

2. ✓ Sulphur

3. ✗ Phosphorus

4. ✗ Silicon

Question Number : 98 Question Id : 89040114510 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Liquefied petroleum gas (LPG) mainly contains

Options :

1. ✗ Methane, Ethane

2. ✗ Ethane, Propane

3. ✓ Butane, Isobutane

4. ✖ Ethene, Ethyne

Question Number : 99 Question Id : 89040114511 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Greenhouse effect is caused by

Options :

1. ✖ NO_2

2. ✖ CO

3. ✖ NO

4. ✔ CO_2

Question Number : 100 Question Id : 89040114512 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which compound is mainly responsible for the depletion of ozone layer?

Options :

1. ✖ CO_2

2. ✖ CH_4

3. ✖ CH_3OH

4. ✔ CF_2Cl_2

Computer Science and Engineering

Section Id :   890401286

Section Number : 4

Section type : Online

Mandatory or Optional : Mandatory

Number of Questions : 100

Number of Questions to be attempted : 100

Section Marks : 100

Maximum Instruction Time : 0

Sub-Section Number : 1

Sub-Section Id : 890401310

Question Shuffling Allowed : Yes

Question Number : 101 Question Id : 89040114513 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a universal gate?

Options :

1. ✖ AND

2. ✖ OR

3. ✔ NAND

4. ✖ XOR

Question Number : 102 Question Id : 89040114514 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a combinational circuit?

Options :

1. ✔ Flip-Flop

2. ✖ Decoder

3. ✖ Multiplexer

4. ✖ Adder

Question Number : 103 Question Id : 89040114515 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

A demultiplexer is a device that _____.

Options :

1. ✖ Encode multiple inputs into one output

2. ✖ Decode binary to decimal

3. ✖ Store binary information

4. ✔ Route a single input to multiple outputs

Question Number : 104 Question Id : 89040114516 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Convert the binary number 110011 into its decimal equivalent.

Options :

1. ✖ 49

2. ✔ 51

3. ✖ 53

4. ✖ 55

Question Number : 105 Question Id : 89040114517 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The number of select lines required for an 8-to-1 multiplexer is?

Options :

1. ✖ 2

2. ✔ 3

3. ✖ 5

4. ✖ 8

Question Number : 106 Question Id : 89040114518 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

. A Sequential logic circuit that toggles its output state on each clock pulse is

Options :

1. ✖ SR flip-flop

2. ✖ D flip-flop

3. ✖ JK flip-flop

4. ✔ T flip-flop

Question Number : 107 Question Id : 89040114519 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Convert the decimal number 108 into its octal equivalent.

Options :

1. ✖ 124

2. ✖

134

3. ✗ 144

4. ✓ 154

Question Number : 108 Question Id : 89040114520 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the simplified form of the Boolean expression $(A + B)(A + C)$?

Options :

1. ✗ $A + B + C$

2. ✗ $AB+C$

3. ✗ $AC+BC$

4. ✓ $A+ BC$

Question Number : 109 Question Id : 89040114521 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the primary purpose of a Software Requirements Specification (SRS) document?

Options :

1. ✗ To define the coding standards

2. ✗ To outline the software design

3. ✓ To describe the functional and non-functional requirements

4. ✖ To test the software

Question Number : 110 Question Id : 89040114522 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The second phase of a waterfall model is

Options :

1. ✖ Requirement gathering

2. ✔ Design

3. ✖ Implementation

4. ✖ Verification

Question Number : 111 Question Id : 89040114523 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In which phase of SDLC is the feasibility study conducted?

Options :

1. ✔ Planning

2. ✖ Implementation

3. ✖ Testing

4. ✖ Maintenance

Question Number : 112 Question Id : 89040114524 Question Type : MCQ Option Shuffling : No

In Agile development, which methodology uses sprints?

Options :

1. ✖ Kanban

2. ✔ Scrum

3. ✖ Waterfall

4. ✖ Spiral

Question Number : 113 Question Id : 89040114525 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which testing level focuses on individual components or modules of the software?

Options :

1. ✔ Unit Testing

2. ✖ System Testing

3. ✖ Integration Testing

4. ✖ Validation Testing

Question Number : 114 Question Id : 89040114526 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which of the following is an advantage of the Incremental Model?

Options :

1. ✖ Complete product is delivered at once

2. ✔ Allows early detection of errors

3. ✖ Does not support customer feedback

4. ✖ Requires no planning

Question Number : 115 Question Id : 89040114527 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following best describes debugging?

Options :

1. ✖ The process of writing code

2. ✖ Running a program without any issues

3. ✖ Adding new features to a program

4. ✔ Identifying and fixing errors in a program

Question Number : 116 Question Id : 89040114528 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which type of requirement deals with performance, reliability, and security?

Options :

1. ✖ Functional Requirements

2. ✖

System Requirements

3. ✓ Non-Functional Requirements

4. ✗ Business requirements

Question Number : 117 Question Id : 89040114529 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which register holds the address of the next instruction to be executed?

Options :

1. ✗ Instruction Register (IR)

2. ✗ Memory Address Register (MAR)

3. ✓ Program Counter (PC)

4. ✗ Stack Pointer (SP)

Question Number : 118 Question Id : 89040114530 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which memory holds frequently accessed data for fast retrieval?

Options :

1. ✓ Cache

2. ✗ ROM

3. ✗ RAM

4. ✖ Hard Drive

Question Number : 119 Question Id : 89040114531 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The 8086 microprocessor has how many address lines?

Options :

1. ✖ 16

2. ✔ 20

3. ✖ 24

4. ✖ 32

Question Number : 120 Question Id : 89040114532 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The primary purpose of an interrupt in a microprocessor is to _____.

Options :

1. ✖ Execute instructions faster

2. ✖ Control memory access

3. ✖ Organize Registers

4. ✔ Handle I/O operations efficiently

Question Number : 121 Question Id : 89040114533 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a volatile memory?

Options :

1. ✔ RAM

2. ✖ ROM

3. ✖ Hard Disk

4. ✖ Flash Drive

Question Number : 122 Question Id : 89040114534 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The size of the general-purpose registers in the 8086 microprocessor is_____.

Options :

1. ✖ 8 bits

2. ✔ 16 bits

3. ✖ 32 bits

4. ✖ 64 bits

Question Number : 123 Question Id : 89040114535 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which component of the CPU coordinates all activities inside it?

Options :

1. ✗ ALU

2. ✓ Control Unit

3. ✗ Register File

4. ✗ Cache

Question Number : 124 Question Id : 89040114536 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the result of the binary addition: $1101 + 1010$?

Options :

1. ✓ 10111

2. ✗ 10011

3. ✗ 11110

4. ✗ 11000

Question Number : 125 Question Id : 89040114537 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Carry Flag (CF) is set when _____.

Options :

1. ✗ The result is negative

2. ✗ An arithmetic operation results in a zero value

3. ✖ A division operation produces a remainder

4. ✔ An arithmetic operation results in a carry out of the most significant bit

Question Number : 126 Question Id : 89040114538 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

In two's complement representation, which statement is true?

Options :

1. ✖ The MSB (Most Significant Bit) is always 0

2. ✔ The MSB determines the sign of the number

3. ✖ Addition does not require special handling

4. ✖ Two's complement is not used in modern computers

Question Number : 127 Question Id : 89040114539 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a type of addressing mode in microprocessors?

Options :

1. ✖ Immediate

2. ✖ Direct

3. ✖ Indirect

4. ✔ Sequential

Question Number : 128 Question Id : 89040114540 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a type of ROM that can be programmed only once?

Options :

1. ✔ PROM

2. ✖ EPROM

3. ✖ EEPROM

4. ✖ Flash Memory

Question Number : 129 Question Id : 89040114541 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which data structure uses the FIFO (First In, First Out) principle?

Options :

1. ✖ Stack

2. ✔ Queue

3. ✖ Linked List

4. ✖ Tree

Question Number : 130 Question Id : 89040114542 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the time complexity of Binary Search on a sorted array?

Options :

1. ✖ O(n)

2. ✖ O(n log n)

3. ✔ O(log n)

4. ✖ O(1)

Question Number : 131 Question Id : 89040114543 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which operation in a queue removes an element?

Options :

1. ✖ Push

2. ✖ Pop

3. ✖ Enqueue

4. ✔ Dequeue

Question Number : 132 Question Id : 89040114544 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one of the following is NOT a linear data structure?

Options :

1. ✖ Array

2. ✖ Stack

3. ✖ Queue

4. ✔ Tree

Question Number : 133 Question Id : 89040114545 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

In Selection Sort, which element is selected at each step while sorting the elements in ascending order?

Options :

1. ✖ The largest element

2. ✔ The Smallest element

3. ✖ The Middle element

4. ✖ Any Random element

Question Number : 134 Question Id : 89040114546 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What type of data structure is used in recursion?

Options :

1. ✔ Stack

2. ✖ Queue

3. ✖ Tree

4. ✖ Linked List

Question Number : 135 Question Id : 89040114547 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which sorting algorithm is based on the divide-and-conquer principle?

Options :

1. ✖ Bubble Sort

2. ✖ Selection Sort

3. ✔ Merge Sort

4. ✖ Insertion Sort

Question Number : 136 Question Id : 89040114548 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which one is not a dynamic data structure?

Options :

1. ✔ Array

2. ✖ Stack

3. ✖ Queue

4. ✖

Linked List

Question Number : 137 Question Id : 89040114549 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the time complexity of deleting an element from the beginning of a linked list?

Options :

1. ✔ O(1)

2. ✖ O(log n)

3. ✖ O(n)

4. ✖ O(n log n)

Question Number : 138 Question Id : 89040114550 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following sorting algorithms is the most efficient in the average case?

Options :

1. ✖ Bubble Sort

2. ✖ Selection Sort

3. ✔ Quick Sort

4. ✖ Insertion Sort

Question Number : 139 Question Id : 89040114551 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which OSI layer is responsible for end-to-end communication?

Options :

1. ✔ Transport

2. ✖ Network

3. ✖ Data Link

4. ✖ Physical

Question Number : 140 Question Id : 89040114552 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the default subnet mask for a Class B IP address?

Options :

1. ✖ 255.0.0.0

2. ✔ 255.255.0.0

3. ✖ 255.255.255.0

4. ✖ 255.255.255.255

Question Number : 141 Question Id : 89040114553 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the main function of a router?

Options :

1. ✖ Signal Amplification

2. ✖ Collision Avoidance

3. ✖ Frame Filtering

4. ✔ Packet Switching

Question Number : 142 Question Id : 89040114554 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The primary purpose of an IP address is to _____.

Options :

1. ✔ Identify devices on a network

2. ✖ Authenticate users

3. ✖ Encrypt Data

4. ✖ Manage network protocols

Question Number : 143 Question Id : 89040114555 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which protocol operates at the Transport Layer of the OSI model?

Options :

1. ✖ IP

2. ✔ TCP

3. ✖ ARP

4. ✖ ICMP

Question Number : 144 Question Id : 89040114556 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which statement best describes a Metropolitan Area Network (MAN)?

Options :

1. ✖ A network that covers a small geographic area, such as a single building

2. ✖ A network that spans a large geographical area, such as a country

3. ✔ A network that connects multiple LANs within a city

4. ✖ A wireless network providing access to mobile users

Question Number : 145 Question Id : 89040114557 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which network model is based on direct connections between computers without a central server?

Options :

1. ✖ Client-Server Model

2. ✔ Peer-to-Peer Model

3. ✖ Hybrid Network Model

4. ✖

Cloud Computing Model

Question Number : 146 Question Id : 89040114558 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which protocol is used to resolve IP addresses to MAC addresses?

Options :

1. ✔ ARP

2. ✖ RARP

3. ✖ ICMP

4. ✖ DHCP

Question Number : 147 Question Id : 89040114559 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What is the primary function of the MAC address?

Options :

1. ✔ Identify devices on a network locally

2. ✖ Define network topology

3. ✖ Provide internet access

4. ✖ Encrypt network traffic

Question Number : 148 Question Id : 89040114560 Question Type : MCQ Option Shuffling : No

Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which layer of the OSI model is responsible for error detection and correction?

Options :

1. ✖ Physical

2. ✔ Data Link

3. ✖ Session

4. ✖ Application

Question Number : 149 Question Id : 89040114561 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

_____ is a device used to amplify and retransmit network signals.

Options :

1. ✖ Router

2. ✖ Switch

3. ✖ Bridge

4. ✔ Repeater

Question Number : 150 Question Id : 89040114562 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What is the purpose of subnetting?

Options :

1. ✖ To convert IPv4 addresses into IPv6

2. ✖ To encrypt network communication

3. ✔ To reduce network congestion and improve efficiency

4. ✖ To multicast Packets

Question Number : 151 Question Id : 89040114563 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which scheduling algorithm gives each process an equal share of CPU time?

Options :

1. ✖ FIFO

2. ✔ Round Robin

3. ✖ Priority Scheduling

4. ✖ Shortest Job Next

Question Number : 152 Question Id : 89040114564 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the purpose of a page table?

Options :

1. ✖ Store file metadata

2. ✖

Track free memory

Manage CPU scheduling

3. ✖

Map logical to physical addresses

4. ✔

Question Number : 153 Question Id : 89040114565 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Excessive swapping between memory and disk in an OS is referred to as _____.

Options :

High CPU usage

1. ✖

Network congestion

2. ✖

Thrashing

3. ✔

Memory fragmentation

4. ✖

Question Number : 154 Question Id : 89040114566 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The Process Control Block (PCB) contains which of the following information?

Options :

Process ID and process state

1. ✔

Memory addresses of all system files

2. ✖

3. ✖

Network configuration settings

CPU scheduling algorithms
4. ✖

Question Number : 155 Question Id : 89040114567 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What does the term 'context switching' refer to in an OS?

Options :

1. ✖ Switching between different networks

2. ✔ Switching the CPU from one process to another

3. ✖ Changing the user interface mode

4. ✖ Allocating additional memory to a process

Question Number : 156 Question Id : 89040114568 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

What is a critical section in process synchronization?

Options :

1. ✔ A protected area of memory

2. ✖ An I/O buffer

3. ✖ A process scheduler

4. ✖

A cache memory section

Question Number : 157 Question Id : 89040114569 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which component of an operating system provides an interface for users to access its services?

Options :

1. ✖ Device drivers

2. ✖ Libraries

3. ✔ System Calls

4. ✖ Process Control Block

Question Number : 158 Question Id : 89040114570 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which page replacement algorithm suffers from Belady's anomaly?

Options :

1. ✖ Optimal

2. ✔ FIFO

3. ✖ LRU

4. ✖ LFU

Question Number : 159 Question Id : 89040114571 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which issue in process synchronization is prevented by using a semaphore?

Options :

1. ✖ CPU scheduling

2. ✔ Deadlocks

3. ✖ Memory Fragmentation

4. ✖ Page Faults

Question Number : 160 Question Id : 89040114572 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the main function of the operating system's scheduler?

Options :

1. ✖ To manage memory allocation

2. ✖ To manage file systems

3. ✔ To manage CPU time for processes

4. ✖ To handle I/O operations

Question Number : 161 Question Id : 89040114573 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Paging involves breaking physical memory into fixed-sized blocks called _____.

Options :

1. ✔ Frames

2. ✖ Segments

3. ✖ Pages

4. ✖ Blocks

Question Number : 162 Question Id : 89040114574 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

The interval from the time of submission of a process to the time of completion is the

Options :

1. ✖ Throughput

2. ✔ Turnaround time

3. ✖ Waiting time

4. ✖ Response time

Question Number : 163 Question Id : 89040114575 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following ensures referential integrity in a relational database?

Options :

1. ✖ Primary Key

2. ✔

Foreign Key

3. ✖ Index

4. ✖ View

Question Number : 164 Question Id : 89040114576 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which normal form removes transitive dependencies?

Options :

1. ✖ 1NF

2. ✖ 2NF

3. ✔ 3NF

4. ✖ BCNF

Question Number : 165 Question Id : 89040114577 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What type of database model uses tables with rows and columns?

Options :

1. ✖ Hierarchical Model

2. ✔ Relational Model

3. ✖ Object Oriented Model

4. ✖ Network Model

Question Number : 166 Question Id : 89040114578 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a valid PL/SQL control statement?

Options :

1. ✖ IF-THEN-ELSE

2. ✖ CASE

3. ✖ LOOP

4. ✔ SWITCH

Question Number : 167 Question Id : 89040114579 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the purpose of the HAVING clause in SQL?

Options :

1. ✔ To filter groups based on a condition

2. ✖ To filter rows based on a condition

3. ✖ To sort the result set

4. ✖ To join tables

Question Number : 168 Question Id : 89040114580 Question Type : MCQ Option Shuffling : No

Which of the following SQL statements contains an error?

Options :

1. ✖ Select * from emp where empid = 1003;

2. ✖ Select empid from emp where empid = 1002;

3. ✖ Select empid from emp;

4. ✔ Select ALL from emp where empid = 1001;

Question Number : 169 Question Id : 89040114581 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

_____ is not a DDL command.

Options :

1. ✖ ALTER

2. ✔ UPDATE

3. ✖ DROP

4. ✖ TRUNCATE

Question Number : 170 Question Id : 89040114582 Question Type : MCQ Option Shuffling : No
Display Question Number : Yes
Correct Marks : 1 Wrong Marks : 0

Which of the following is a key characteristic of NoSQL databases?

Options :

1. ✖ Fixed schema

2. ✖ Relational data model

3. ✔ Scalability and flexibility

4. ✖ Only supports structured data

Question Number : 171 Question Id : 89040114583 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a NoSQL database type?

Options :

1. ✖ Document-based

2. ✖ Key-Value Store

3. ✖ Graph-based

4. ✔ Relational

Question Number : 172 Question Id : 89040114584 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the purpose of normalization in a relational database?

Options :

1. ✖ To increase data redundancy

2. ✖

To decrease performance

3. ✖   To store all data in a single table

4. ✔   To eliminate data redundancy and improve integrity

Question Number : 173 Question Id : 89040114585 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a principle of Object-Oriented Programming?

Options :

1. ✖   Encapsulation

2. ✔   Interfaces

3. ✖   Abstraction

4. ✖   Polymorphism

Question Number : 174 Question Id : 89040114586 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which keyword is used to define an object in C++?

Options :

1. ✖   create

2. ✔   new

3. ✖   object

4. ✖ call

Question Number : 175 Question Id : 89040114587 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the output of the following code snippet?

```
#include <iostream>
using namespace std;

int main() {
    int x = 5;
    int y = x++;
    cout << y;
    return 0;
}
```

Options :

1. ✔ 5

2. ✖ 6

3. ✖ 0

4. ✖ Compilation error

Question Number : 176 Question Id : 89040114588 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a type of constructor in C++?

Options :

1. ✖ Copy Constructor

2. ✖ Default Constructor

3. ✔ Static Constructor

4. ✖ Parameterized Constructor

Question Number : 177 Question Id : 89040114589 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following operators cannot be overloaded?

Options :

1. ✔ ::

2. ✖ +

3. ✖ *

4. ✖ =

Question Number : 178 Question Id : 89040114590 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the correct syntax for declaring a pure virtual function in C++?

Options :

1. ✖ void virtual show ( ) = 0

2. ✖ void show ( ) virtual

3. ✔ virtual void show ( ) = 0

4. ✖ pure virtual void show ( )

Question Number : 179 Question Id : 89040114591 Question Type : MCQ Option Shuffling : No

What is the purpose of the *endl* manipulator in C++?

Options :

1. ✖   It only moves the cursor to the next line.

2. ✖   It only flushes the output buffer.

3. ✔   It moves the cursor to the next line and flushes the output buffer.

4. ✖   It inserts a tab space in the output.

What will be the output of the following code?

```cpp
#include <iostream>
using namespace std;
int main() {
    int a = 10;
    int *ptr = &a;
    cout << *ptr;
    return 0;
}
```

Options :

1. ✖ Address of a

2. ✔ 10

3. ✖ 0

4. ✖ Compilation error

Question Number : 181 Question Id : 89040114593 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the main purpose of templates in C++?

Options :

1. ✖ To improve runtime performance

2. ✖ To speed up program execution

3. ✖ To enable function overriding

4. ✔ To define functions and classes that can operate on different data types

Question Number : 182 Question Id : 89040114594 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the meaning of encapsulation in Object Oriented Programming?

Options :

1. ✖ Avoiding class usage

2. ✖ Using only public methods

3. ✖ Allowing global access to variables

4. ✔ Hiding implementation details

Question Number : 183 Question Id : 89040114595 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which keyword is used to define a constant in Java?

Options :

1. ✔ final

2. ✖ const

3. ✖ static

4. ✖ volatile

Question Number : 184 Question Id : 89040114596 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a valid declaration of a Java array?

Options :

1. ✖ int arr[] = new int[];

2. ✖ int arr = new int[5];

3. ✔ int arr[] = new int[5];

4. ✖ int arr[] = new int(5);

Question Number : 185 Question Id : 89040114597 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

_____ is a collection of classes and interfaces.

Options :

1. ✖ Object

2. ✖ Collection

3. ✔ Package

4. ✖ Array

Question Number : 186 Question Id : 89040114598 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the purpose of the super keyword in Java?

Options :

1. ✔ To refer to the superclass object

2. ✖ To refer to the current object

3. ✖ To define a constant

4. ✖ To allocate memory dynamically

Question Number : 187 Question Id : 89040114599 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT an event class in Java?

Options :

1. ✖ FocusEvent

2. ✖ ItemEvent

3. ✔ LayoutEvent

4. ✖ ActionEvent

Question Number : 188 Question Id : 89040114600 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is the superclass of all exceptions in Java?

Options :

1. ✖ Error

2. ✔ Throwable

3. ✖ ArthimeticException

4. ✖ Exception

Question Number : 189 Question Id : 89040114601 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which method is used to display output of an applet?

Options :

1. ✖ show ( )

2. ✖ run ( )

3. ✔ paint ( )

4. ✖ print ( )

Question Number : 190 Question Id : 89040114602 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What will be the output of the following Java program?

```java
class Output
{
    public static void main(String args[])
    {
        int arr[] = {1, 2, 3, 4, 5};
        for ( int i = 0; i < arr.length - 2; ++i)
            System.out.println(arr[i] + " ");
    }
}
```

Options :

1. ✖ 1 2

2. ✔ 1 2 3

3. ✖ 1 2 3 4

4. ✖ 1 2 3 4 5

Question Number : 191 Question Id : 89040114603 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a valid way to create a thread in Java?

Options :

1. ✔ Implementing the Runnable interface

2. ✖ Calling the run() method directly

3. ✖ Using the Callable interface

4. ✖ Implementing the java class

Question Number : 192 Question Id : 89040114604 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is the top-level container in AWT?

Options :

1. ✖ Panel

2. ✖ Label

3. ✖ Button

4. ✔ Frame

Question Number : 193 Question Id : 89040114605 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the correct way to refer to an external CSS file?

Options :

1. ✖ <link style src="styles.css">

2. ✖ <css>styles.css</css>

3. ✔ <link rel="stylesheet" href="styles.css">

4. ✖ <stylesheet>styles.css</stylesheet>

Question Number : 194 Question Id : 89040114606 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is a client-side scripting language?

Options :

1. ✖ Java

2. ✔ JavaScript

3. ✖ Ruby

4. ✖ PERL

Question Number : 195 Question Id : 89040114607 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which HTML tag is used to insert an image?

Options :

1. ✖

2. ✖

3. ✔

4. ✖

Question Number : 196 Question Id : 89040114608 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a JavaScript data type?

Options :

1. ✖ String

2. ✖ Boolean

3. ✔ Float

4. ✖ Object

Question Number : 197 Question Id : 89040114609 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What does XML stand for?

Options :

1. ✖ Extra Markup Language

2. ✔ Extensible Markup Language

3. ✖ Example Markup Language

4. ✖ Executable Markup Language

Question Number : 198 Question Id : 89040114610 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which jQuery function is used to make an element invisible?

Options :

1. ✔ hide ( )

2. ✖ remove ( )

3. ✖ notDisplay ( )

4. ✖ invisible ( )

Question Number : 199 Question Id : 89040114611 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

What is the purpose of the echo statement in PHP?

Options :

1. ✖ store data in a database

2. ✖ execute JavaScript code

3. ✔ display output on a webpage

4. ✖ To comment on code

Question Number : 200 Question Id : 89040114612 Question Type : MCQ Option Shuffling : No Display Question Number : Yes

Correct Marks : 1 Wrong Marks : 0

Which PHP function is used to redirect a page?

Options :

1. ✖ redirect ( )

2. ✔ header ( )

3. ✖ navigate ( )

gotoPage ( )

4. ✖