# Question Paper Preview

**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 31st Aug 2020 Shift 1 SET 2 |
| **Subject Name :** | Computer Science and Engineering |
| **Creation Date :** | 2020-08-31 17:38:56 |
| **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 |

## Computer Science and Engineering

| | |
|---|---|
| **Group Number :** | 1 |
| **Group Id :** | 76439059 |
| **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 |

## Mathematics

| | |
|---|---|
| **Section Id :** | 764390227 |
| **Section Number :** | 1 |
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 50 |
| **Number of Questions to be attempted :** | 50 |
| **Section Marks :** | 50 |
| **Display Number Panel :** | Yes |
| **Group All Questions :** | Yes |
| **Mark As Answered Required? :** | Yes |
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 764390257 |
| **Question Shuffling Allowed :** | Yes |

**Question Number : 1 Question Id : 76439011625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $P=\begin{bmatrix}1 & 2 & 3\\ 2 & 3 & 4\\ 0 & 1 & 2\end{bmatrix}=A+B$, where A is symmetric and B is skew symmetric, then $B=$

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

**Options :**

76439046401. $\begin{bmatrix}2 & 4 & 3\\ -4 & 6 & 5\\ -3 & -5 & 4\end{bmatrix}$

76439046402. $\begin{bmatrix}0 & 0 & 3\\ 4 & 0 & 3\\ -3 & -3 & 0\end{bmatrix}$

76439046403. $\begin{bmatrix}2 & 3 & 1\\ -3 & 6 & 5\\ -1 & -5 & 4\end{bmatrix}$

76439046404. $\begin{bmatrix}1 & 1 & 1\\ -1 & 0 & 1\\ -1 & -1 & 0\end{bmatrix}$

**Question Number : 2 Question Id : 76439011626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Let $A=\begin{bmatrix}1 & 2 & 3\\ 2 & 3 & 4\\ 0 & 1 & 2\end{bmatrix}$, $C=\begin{bmatrix}3 & 0 & 0\\ 0 & 3 & 0\\ 0 & 0 & 3\end{bmatrix}$, $E=\begin{bmatrix}0 & 1 & 6\\ -1 & 0 & 8\\ -6 & -8 & 0\end{bmatrix}$, $F=\begin{bmatrix}1 & 6 & 0\\ 8 & 0 & -8\\ 0 & -6 & -1\end{bmatrix}$. The non skew symmetric matrix having rank 2 is

**Options :**

76439046405. ✖ E

76439046406. ✔ F

76439046407. ✔ A

76439046408. ✖ C

**Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.**

**Question Number : 3 Question Id : 76439011627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $A=\begin{bmatrix}1 & 2 & 3\\ 2 & 3 & 4\\ 0 & 1 & 2\end{bmatrix}$, $B=\begin{bmatrix}1 & w & w^2\\ w & w^2 & 1\\ w^2 & 1 & w\end{bmatrix}$, where $w$ is complex cube root of unity,

$C=\begin{bmatrix}3 & 0 & 0\\ 0 & 3 & 0\\ 0 & 0 & 3\end{bmatrix}$, $D=\begin{bmatrix}0 & 0 & 3\\ 0 & 3 & 0\\ 3 & 0 & 0\end{bmatrix}$, then the matrix having rank 1 is

**Options :**

76439046409. ✖ A

76439046410. ✖ D

76439046411. ✔ B

76439046412. ✖ C

**Question Number : 4 Question Id : 76439011628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $A=\left(a_{ij}\right)_{3\times 3}$ is a real skew symmetric matrix, then $a_{11}+a_{22}+a_{33}+\left|A\right|=$

**Options :**

76439046413. ✔ 0

76439046414. ✖ 1

76439046415. ✖ 3

76439046416. ✖ 4

**Question Number : 5 Question Id : 76439011629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\frac{x^2+13x+15}{(2x+3)(x+3)^2}=\frac{A}{2x+3}+\frac{B}{x+3}+\frac{C}{(x+3)^2}$ then $6A+9B+2C=$

**Options :**

76439046417. ✖ $0$

76439046418. ✖ $1$

76439046419. ✔ $13$

76439046420. ✖ $15$

**Question Number : 6 Question Id : 76439011630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\log_{10} k = A$ then $\log_{10}\left(\frac{1}{10k}\right)$ is equal to

**Options :**

76439046421. ✔ $-(A+1)$

76439046422. ✖ $(A+10)$

76439046423. ✖ $(A+k)$

76439046424. ✖ $(A+10k)$

**Question Number : 7 Question Id : 76439011631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$\sin^2 10^\circ+\sin^2 20^\circ+\sin^2 30^\circ+.....+\sin^2 80^\circ+\sin^2 90^\circ=$

**Options :**

76439046425. ✖ $0$

76439046426. ✖ $2$

76439046427. ✖ $4$

76439046428. ✔ 5

**Question Number : 8 Question Id : 76439011632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Assertion(A): $\tan 6^\circ \tan 42^\circ \tan 66^\circ \tan 78^\circ = 1$.

Reasoning(R): If 3A is not an odd multiple of $\pi/2$ then,

$\tan A \cdot \tan(60^\circ + A) \tan(60^\circ - A) = \tan 3A$

**Options :**

76439046429. ✔ A is true, R is true and R is correct explanation of A

76439046430. ✖ A is true, R is true and R is not correct explanation of A

76439046431. ✖ A is true, R is false

76439046432. ✖ A is false, R is true

**Question Number : 9 Question Id : 76439011633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\theta_1, \theta_2$ are solutions of the equation $\cos 2\theta + 2\sin 2\theta = 3$, $\tan\theta_1 \neq \tan\theta_2$, then $\cot\theta_1 \cdot \cot\theta_2 =$

**Options :**

76439046433. ✖ 0

76439046434. ✖ 1/2

76439046435. ✖ 1

76439046436. ✔ 2

**Question Number : 10 Question Id : 76439011634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\tan^{-1}\left(\frac{1-x}{1+x}\right) = \frac{1}{2}\tan^{-1} x$, then the value of $x$ is

**Options :**

76439046437. ✖ 0

76439046438. ✔ $1/\sqrt{3}$

76439046439. ✖ $\sqrt{3}$

76439046440. ✖ 2

**Question Number : 11 Question Id : 76439011635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\sinh^3 x - \cosh^3 x = \frac{Ke^x - e^{Kx}}{1-K}$, then $K =$

**Options :**

76439046441. ✖ -4

76439046442. ✔ -3

76439046443. ✖ 3

76439046444. ✖ 4

**Question Number : 12 Question Id : 76439011636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If in a $\Delta ABC$, with usual notation $(a-b)(S-c) = (b-c)(S-a)$, then

**Options :**

76439046445. ✖ $r_1, r_2, r_3$ are in GP.

76439046446. ✖ $a, b, c$ are in AP.

76439046447. ✔ $r_1, r_2, r_3$ are in AP.

76439046448. ✖ $a, b, c$ are in GP.

**Question Number : 13 Question Id : 76439011637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Consider a triangle ABC and its incircle. Let 2S be the perimeter of the triangle. Let D,E, F be the points of contact of the incircle with the triangle. Suppose D, E, F lie on AB, BC and CA respectively, then AD+BE+CF =

**Options :**

76439046449. ✖ S/2

76439046450. ✖ S/3

76439046451. ✔ S

76439046452. ✖ 2S

**Question Number : 14 Question Id : 76439011638 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\sin\alpha+\sin\beta+\sin\gamma=3$, then the value of $\tan\frac{\alpha}{2}+\tan\frac{\beta}{2}+\tan\frac{\gamma}{2}$ is

**Options :**

76439046453. ✖ 3/2

76439046454. ✖ 2

76439046455. ✖ 5/2

76439046456. ✔ 3

**Question Number : 15 Question Id : 76439011639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$cis\frac{\pi}{5}cis\frac{\pi}{10}cis\frac{3\pi}{10}cis\frac{4\pi}{10}=$

**Options :**

76439046457. ✔ -1

76439046458. ✖ 0

76439046459. ✖ 1

76439046460. ✖ 4

**Question Number : 16 Question Id : 76439011640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The complex number $\frac{2-i}{(1-2i)^2}$ lies in the

**Options :**

76439046461. ✖ first quadrant

76439046462. ✔ second quadrant

76439046463. ✖ third quadrant

76439046464. ✖ fourth quadrant

**Question Number : 17 Question Id : 76439011641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The equation of the circle whose ends of a diameter are (1,2) and (5,2) is

**Options :**

76439046465. ✔ $x^2+y^2-6x-4y+9=0$

76439046466. ✖ $x^2+y^2+6x-4y+9=0$

76439046467. ✖ $x^2+y^2-6x-4y+13=0$

76439046468. ✖ $x^2+y^2-6x-4y+5=0$

**Question Number : 18 Question Id : 76439011642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The equation of the circle passing through (0,0), (0,1) and (1,0) is

**Options :**

76439046469. ✔ $x^2+y^2-x-y=0$

76439046470. ✖ $x^2+y^2+x-y=0$

76439046471. ✖ $x^2+y^2-x+y=0$

76439046472. ✖ $x^2+y^2+x+y-2=0$

**Question Number : 19 Question Id : 76439011643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If the circle $x^2+y^2-4x+2fy+4=0$ touches both coordinate axes, then the set of all possible values of $f$ is

**Options :**

76439046473. ✖ $\{-4,4\}$

76439046474. ✖ $\{-\sqrt{2},\sqrt{2}\}$

76439046475. ✔ $\{-2,2\}$

76439046476. ✖ $\{4\}$

**Question Number : 20 Question Id : 76439011644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $y=\cos^{-1}\left(\frac{a^2-x^2}{a^2+x^2}\right)+\sin^{-1}\left(\frac{2ax}{a^2+x^2}\right)$, then $\frac{dy}{dx}=$

**Options :**

76439046477. ✖ $\frac{4a^2}{a^2+x^2}$

76439046478. ✔ $\frac{4a}{a^2+x^2}$

76439046479. ✖ $\frac{2a}{a^2+x^2}$

76439046480. ✖ $\frac{2a^2}{a^2+x^2}$

**Question Number : 21 Question Id : 76439011645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Let $f:\mathbb{R}\to\mathbb{R}$ be defined by $f(x)=|x+1|+|x+2|+|x+3|$. If $f$ is differentiable at $x$, then $x$ belongs to the set

**Options :**

76439046481. ✖ $\{-1,-2,-3\}$

76439046482. ✖ $\mathbb{R}-\{1,2,3\}$

76439046483. ✔ $\mathbb{R}-\{-1,-2,-3\}$

76439046484. ✖ $\{1,2,3\}$

**Question Number : 22 Question Id : 76439011646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $y=\sin(m\sin^{-1}x)$, then $\left(1-x^2\right)\frac{d^2y}{dx^2}-x\frac{dy}{dx}=$

**Options :**

76439046485. ✖ $my$

76439046486. ✔ $-m^2y$

76439046487. ✖ $m^2y$

76439046488. ✖ $-my$

**Question Number : 23 Question Id : 76439011647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The slope of the tangent to the curve $x^{2/3}+y^{2/3}=2$ at $(1,1)$ is

**Options :**

76439046489. ✖ 0

76439046490. ✔ -1

76439046491. ✖ 1

76439046492. ✖ 2

**Question Number : 24 Question Id : 76439011648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The interval in which the rational function $f(x) = \frac{x^2+x+1}{x^2-x+1}$ is decreasing is

**Options :**

76439046493. ✖ $(-1, 1)$

76439046494. ✖ $(-\infty, 1)$

76439046495. ✖ $(-1, \infty)$

76439046496. ✔ $(-\infty, -1) \cup (1, \infty)$

**Question Number : 25 Question Id : 76439011649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\tan u = \frac{x^3+y^3}{x-y}$, $x \neq y$, then $x\frac{\partial u}{\partial x} + y\frac{\partial u}{\partial y} =$

**Options :**

76439046497. ✖ $2u$

76439046498. ✔ $\sin 2u$

76439046499. ✖ $\cos 2u$

76439046500. ✖ $\tan 2u$

**Question Number : 26 Question Id : 76439011650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$\lim_{x\to 0}\left(\frac{\tan x}{x}\right)^{1/x^2} =$

**Options :**

76439046501. ✖ 1

76439046502. ✖ e

76439046503. ✔ $e^{1/3}$

76439046504. ✖ $e^3$

**Question Number : 27 Question Id : 76439011651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

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

**Options :**

76439046505. ✖ $\log(1+e^{-x})+C$

76439046506. ✖ $\log(1+e^x)+C$

76439046507. ✔ $\log(\frac{e^x}{1+e^x})+C$

76439046508. ✖ $-\log(1+e^x)+C$

**Question Number : 28 Question Id : 76439011652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$$\int \frac{dx}{9\sin^2 x+4\cos^2 x} =$$

**Options :**

76439046509. ✔ $\frac{1}{6}\tan^{-1}\left(\frac{3}{2}\tan x\right)+C$

76439046510. ✖ $\frac{1}{9}\tan^{-1}(\tan x)+C$

76439046511. ✖ $\frac{1}{12}\tan^{-1}\left(\tan\frac{2}{3}x\right)+C$

76439046512. ✖ $\frac{1}{6}\tan^{-1}\left(\tan\frac{3}{2}x\right)+C$

**Question Number : 29 Question Id : 76439011653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$\int_0^{\pi/2}\left(\sin^{5/2}x-\cos^{5/2}x\right)dx=$

**Options :**

76439046513. ✔ 0

76439046514. ✖ 1

76439046515. ✖ -1

76439046516. ✖ 2

**Question Number : 30 Question Id : 76439011654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$\lim_{n\to\infty}\frac{3^k+6^k+9^k+.....+(3n)^k}{n^{k+1}}=$

**Options :**

76439046517. ✖ $\frac{3^{k+1}}{k+1}$

76439046518. ✔ $\frac{3^k}{k+1}$

76439046519. ✖ $\frac{3^{k+1}}{k}$

76439046520. ✖ $\frac{3^k}{k!}$

**Question Number : 31 Question Id : 76439011655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The area (in square units) of one of the curvilinear triangles bounded by $y=\sin x, y=\cos x,$

$x=0, x=\frac{\pi}{2}$ and $x-$axis is

**Options :**

76439046521. ✖ $2\sqrt{2}$

76439046522. ✖ $2+\sqrt{2}$

76439046523. ✔ $2-\sqrt{2}$

76439046524. ✖ $\sqrt{2}$

**Question Number : 32 Question Id : 76439011656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Let $V_1$ be the volume of the solid formed by the revolution of the part of the parabola

$y^2=4ax$ cut off by the latus-rectum about the $y$-axis. Then $V_1=$

**Options :**

76439046525. ✖ $\frac{2\pi a^3}{5}$

76439046526. ✔ $\frac{4\pi a^3}{5}$

76439046527. ✖ $\frac{8\pi a^3}{5}$

76439046528. ✖ $\pi a^3$

**Question Number : 33 Question Id : 76439011657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The root mean square value of the sine function $f(t)=A\sin t$ on $[0,2\pi]$ is

**Options :**

76439046529. ✖ $A\sqrt{2}$

76439046530. ✔ $\frac{A}{\sqrt{2}}$

76439046531. ✖ $A$

76439046532. ✖ $2A$

**Question Number : 34 Question Id : 76439011658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The approximate value of $\int_0^4 f(x)dx$, from the following table as sum of areas of 4 trapeziums is

| $x$ | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| $f(x)$ | 1 | 0.5 | 0.2 | 0.1 | 0.05884 |

**Options :**

76439046533. ✖ 1.31212

76439046534. ✔ 1.32942

76439046535. ✖ 1.33212

76439046536. ✖ 1.32121

**Question Number : 35 Question Id : 76439011659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The order of the differential equation corresponding to $y = Ae^x + Be^{3x} + Ce^{5x}$, where $A, B, C$ are parameters is

**Options :**

76439046537. ✖ 2

76439046538. ✔ 3

76439046539. ✖ 4

76439046540. ✖ 6

**Question Number : 36 Question Id : 76439011660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The general solution of the differential equation $\left(xy+x^3y\right)dy-\left(1+y^2\right)dx=0$, is

**Options :**

76439046541. ✖ $(1+x^2)(1+y^2)=Ce^{x^2}$

76439046542. ✖ $(1+x^2)/(1+y^2)=Ce^{x^2}$

76439046543. ✔ $(1+x^2)(1+y^2)=Cx^2$

76439046544. ✖ $(1+x^2)/(1+y^2)=Cx^2$

**Question Number : 37 Question Id : 76439011661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The solution of the equation $xdy-\left(y-x\cos^2\frac{y}{x}\right)dx=0, x>0, y>0$ which passes through the point $(1,\pi/4)$ is

**Options :**

76439046545. ✖ $\frac{4y}{\pi}=e^{1-\tan\left(y/x\right)}$

76439046546. ✔ $x=e^{1-\tan\left(y/x\right)}$

76439046547. ✖ $x=e^{-\tan\left(y/x\right)}$

76439046548. ✖ $y=\frac{\pi e}{4}e^{-\tan\left(y/x\right)}$

**Question Number : 38 Question Id : 76439011662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The differential equation of a family of all circles passing through the origin and having centres on the x-axis is

**Options :**

76439046549. ✖ $y' = \frac{x^2 + y^2}{2xy}$

76439046550. ✖ $y' = \frac{2xy}{x^2 - y^2}$

76439046551. ✔ $y' = \frac{y^2 - x^2}{2xy}$

76439046552. ✖ $y' = 2xy(x^2 + y^2)$

**Question Number : 39 Question Id : 76439011663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

An integrating factor of the differential equation $\left(e^{-2\sqrt{x}} - y\right)dx - \sqrt{x}dy = 0$ is

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

**Options :**

76439046553. $\frac{e^{-2\sqrt{x}}}{\sqrt{x}}$

76439046554. $e^{-2\sqrt{x}}$

76439046555. $\frac{e^{2\sqrt{x}}}{\sqrt{x}}$

76439046556. $e^{-2\sqrt{x}}$

**Question Number : 40 Question Id : 76439011664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following equations can be made exact by multiplying by $x^2$?

**Options :**

76439046557. ✔ $\frac{dy}{dx}+\frac{2}{x}y=4$

76439046558. ✖ $\frac{dy}{dx}+3y=x$

76439046559. ✖ $\frac{1}{x}\frac{dy}{dx}-\frac{1}{x^2}y=x$

76439046560. ✖ $\frac{dy}{dx}+y=3x$

**Question Number : 41 Question Id : 76439011665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A particular integral of $(D-2)^2 y=8\left(e^{2x}+\sin 2x\right)$ is

**Options :**

76439046561. ✔ $4x^2e^{2x}+\cos 2x$

76439046562. ✖ $x^2e^{2x}+\cos 2x$

76439046563. ✖ $4xe^{2x}-\cos 2x$

76439046564. ✖ $4x^2e^{x}+\cos 2x$

**Question Number : 42 Question Id : 76439011666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The Complementary function of $x^2\frac{d^2y}{dx^2}+4x\frac{dy}{dx}+2y=e^x$, is

**Options :**

76439046565. ✖ $C_1e^{-x}+C_2e^{-2x}$

76439046566. ✔ $C_1x^{-1}+C_2x^{-2}$

76439046567. ✖ $C_1e^{x}+C_2e^{2x}$

76439046568. ✖ $C_1x^{1}+C_2x^{2}$

**Question Number : 43 Question Id : 76439011667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Let $f(t)=t^2e^{-3t}, t\geq 0$. Then the Laplace transform of $f$ is

**Options :**

76439046569. ✔ $\frac{2}{(s+3)^3}$

76439046570. ✖ $\frac{2}{(s-3)^3}$

76439046571. ✖ $\frac{3}{(s+3)^3}$

76439046572. ✖ $\frac{-3}{(s+3)^3}$

**Question Number : 44 Question Id : 76439011668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Let $f(t)=t\sin t,\ t\geq 0,$ then the Laplace transform of $f$ is

**Options :**

76439046573. ✔ $\frac{2s}{(1+s^2)^2}$

76439046574. ✖ $\frac{2s}{(1+s^2)^3}$

76439046575. ✖ $\frac{-2s}{(1+s^2)^2}$

76439046576. ✖ $\frac{-2s}{(1+s^2)^3}$

**Question Number : 45 Question Id : 76439011669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The inverse Laplace transform of $\frac{3}{s^2-9}$ is

**Options :**

76439046577. ✖ $e^{3t}$

76439046578. ✖ $e^{-3t}$

76439046579. ✖ $\cos 3t$

76439046580. ✔ $\sinh 3t$

**Question Number : 46 Question Id : 76439011670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The inverse Laplace transform of $\frac{1}{s^2(s^2+1)}$ is

**Options :**

76439046581. ✔ $t-\sin t$

76439046582. ✖ $t+\sin t$

76439046583. ✖ $2t-\sin t$

76439046584. ✖ $2t+\sin t$

**Question Number : 47 Question Id : 76439011671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\frac{dx}{dt}+3x=0,\ x(0)=1$ and $X(s)$ is Laplace transform of $x(t)$, then $\frac{d}{ds}X(s)=$

**Options :**

76439046585. ✖ $\frac{1}{(s-3)^2}$

76439046586. ✔ $\frac{-1}{(s+3)^2}$

76439046587. ✖ $\frac{1}{s+3}$

76439046588. ✖ $\frac{-1}{s-3}$

**Question Number : 48 Question Id : 76439011672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $X(s)$ is Laplace transform of $x(t)$ and $t\frac{dx}{dt}+x(t)=\sin t$, then $\frac{d}{ds}X(s)=$

**Options :**

76439046589. ✖ $\frac{1}{s^2+1}$

76439046590. ✔ $-\frac{1}{s(s^2+1)}$

76439046591. ✖ $\frac{s}{s^2+1}$

76439046592. ✖ $-\frac{s}{s^2+1}$

**Question Number : 49 Question Id : 76439011673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The Fourier series of $f(x)=x^2$ in $-\pi \le x \le \pi$, is

**Options :**

76439046593. ✖ $f(x)=\frac{\pi^2}{3}+4\sum_{n=1}^{\infty}\frac{(-1)^n}{n^2}\cos(nx)$

76439046594. ✔ $f(x) = \frac{2\pi^2}{3} + 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n^2} \cos(nx)$

76439046595. ✖ $f(x) = \frac{\pi^2}{3} + \sum_{n=1}^{\infty} \frac{(-1)^n}{n^2} \cos(nx)$

76439046596. ✖ $f(x) = \frac{\pi^2}{3} + 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n} \cos(nx)$

**Question Number : 50 Question Id : 76439011674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The Fourier series of the function $f(x) = 2x + 1$ , in $-\pi < x < \pi$, is

**Options :**

76439046597. ✖ $1 + 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n^2} \sin(nx)$

76439046598. ✖ $1 + 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n^2} \cos(nx)$

76439046599. ✖ $1 - 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n} \cos(nx)$

76439046600. ✔ $1 - 4\sum_{n=1}^{\infty} \frac{(-1)^n}{n} \sin(nx)$

## Physics

| | |
|---|---|
| **Section Id :** | 764390228 |
| **Section Number :** | 2 |
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 25 |
| **Number of Questions to be attempted :** | 25 |
| **Section Marks :** | 25 |
| **Display Number Panel :** | Yes |
| **Group All Questions :** | Yes |
| **Mark As Answered Required? :** | Yes |
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 764390258 |
| **Question Shuffling Allowed :** | Yes |

**Question Number : 51 Question Id : 76439011675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The dimensional formula for Kinetic energy is

**Options :**

76439046601. ✖ $M^{o} L^{o} T^{o}$

76439046602. ✔ $M L^{2} T^{-2}$

76439046603. ✖ $M L^{2} T^{-1}$

76439046604. ✖ $M L T^{-2}$

**Question Number : 52 Question Id : 76439011676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following quantities with its SI Units

| | | |
|---|---|---|
| a) | Energy | (i) Watt |
| b) | Force | (ii) Newton |
| c) | Power | (iii) Pascal |
| d) | Pressure | (iv) Joule |

Choose the correct option from the following:

**Options :**

76439046605. ✔ a-iv, b-ii, c-i , d-iii

76439046606. ✖ a-iv, b-i, c-ii, d-iii

76439046607. ✖ a-i, b-ii, c-iii, d-iv

76439046608. ✖ a-iv, b-ii, c-iii, d-i

**Question Number : 53 Question Id : 76439011677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Choose the correct form of Einstein's photoelectric equation, where the symbols have their usual meaning.

**Options :**

76439046609. ✔ $h\upsilon = \frac{1}{2} m v^{2}_{max} + W_{o}$

76439046610. ✖ $h\upsilon = \frac{1}{2} mv^2_{max} - w_o$

76439046611. ✖ $h\upsilon_o = \frac{1}{2} mv^2_{max} + h\upsilon$

76439046612. ✖ $h\upsilon_o = \frac{1}{2} mv^2_{max} - h\upsilon$

**Question Number : 54 Question Id : 76439011678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The electrical resistance for superconductor is

**Options :**

76439046613. ✖ Infinity

76439046614. ✔ Zero

76439046615. ✖ Very high

76439046616. ✖ Depends on the material

**Question Number : 55 Question Id : 76439011679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Convert $-15^0$C into Fahrenheit scale

**Options :**

76439046617. ✖ $20^0$ F

76439046618. ✖ $15^0$ F

76439046619. ✖ $10^0$ F

76439046620. ✔ $5^0$ F

**Question Number : 56 Question Id : 76439011680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If the heat is added to the system then, it is utilised to

A. Change in its internal energy

B. the work done by it

Choose the correct option from the following:

**Options :**

76439046621. ✖ only A is correct

76439046622. ✖ only B is correct

76439046623. ✔ Both A and B are correct

76439046624. ✖ Both A and B are not correct

**Question Number : 57 Question Id : 76439011681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $|\vec{A}+\vec{B}|=|\vec{A}-\vec{B}|$, then the angle between $\vec{A}$ and $\vec{B}$will be

**Options :**

76439046625. ✔ $\frac{\pi}{2}$

76439046626. ✖ $\pi$

76439046627. ✖ $\frac{\pi}{3}$

76439046628. ✖ $\frac{\pi}{4}$

**Question Number : 58 Question Id : 76439011682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A force vector applied on a mass 'm' is represented as $\vec{F}=8\hat{\imath}+10\,\hat{\jmath}+6\hat{k}$ and accelerates it with 2m/sec$^2$, the mass of the body is

**Options :**

76439046629. ✖ 20 kg

76439046630. ✖ $10\sqrt{2}$ kg

76439046631. ✖ 30 kg

76439046632. ✔ $\frac{10}{\sqrt{2}}$ kg

**Question Number : 59 Question Id : 76439011683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The splash of sound is heard 2.05 sec after the stone is dropped into a well of depth 19.6 m. Velocity of the sound is ($g$=9.8 m/sec$^2$).

**Options :**

76439046633. ✖ 592 m/sec

76439046634. ✖ 692 m/sec

76439046635. ✔ 392 m/sec

76439046636. ✖ 292 m/sec

**Question Number : 60 Question Id : 76439011684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Four bodies P, Q, R and S are projected with equal velocities having angle of projection 15°,30°,45° and 60° with the horizontal respectively. the body having shortest range is

**Options :**

76439046637. ✖ $\sqrt{3}\frac{u^2}{2g}$

76439046638. ✖ $\frac{u^2}{g}$

76439046639. ✔ $\frac{u^2}{2g}$

76439046640. ✖ $\frac{\sqrt{3u^2}}{2g}$

**Question Number : 61 Question Id : 76439011685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A stone is thrown vertically upwards from the ground. It reaches a maximum height of 50 m in 10 sec. After what time will it reach the ground from the maximum height. (if the air resistance is not considered)

**Options :**

76439046641. ✖ 20 sec

76439046642. ✔ 10 sec

76439046643. ✖ 30 sec

76439046644. ✖ 5 sec

**Question Number : 62 Question Id : 76439011686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If $\mu_s$ , $\mu_k$, and $\mu_r$ are the co-efficient of static, kinetic and rolling friction respectively then

**Options :**

76439046645. ✖ $\mu_s > \mu_k < \mu_r$

76439046646. ✖ $\mu_s < \mu_k > \mu_r$

76439046647. ✖ $\mu_s = \mu_k = \mu_r$

76439046648. ✔ $\mu_s > \mu_k > \mu_r$

**Question Number : 63 Question Id : 76439011687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A wooden block of 100 kg is about to be pushed on a floor of coefficient of friction 0.4. What is the magnitude of the force of friction on the wooden block when it is just pushed.

**Options :**

76439046649. ✖ 196N

76439046650. ✖ 490N

76439046651. ✔ 392N

76439046652. ✖ 294N

**Question Number : 64 Question Id : 76439011688 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The area under a ' force - displacement' curve gives.

**Options :**

76439046653. ✖ Time

76439046654. ✔ Work

76439046655. ✖ Impulse

76439046656. ✖ Power

**Question Number : 65 Question Id : 76439011689 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If a body is released from a certain height, during its fall.

**Options :**

76439046657. ✖ Its potential energy increases and kinetic energy decreases

76439046658. ✔ Its kinetic energy increases and potential energy decreases

76439046659. ✖ Both potential energy and kinetic energy of that body increases

76439046660. ✖ Both potential energy and kinetic energy decreases

**Question Number : 66 Question Id : 76439011690 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Find the power of an electric motor, if it lifts 200 kg of water in 5 minutes from a well of 120 m depth.

**Options :**

76439046661. ✖ 790W

76439046662. ✔ 784W

76439046663. ✖ 768W

76439046664. ✖ 755W

**Question Number : 67 Question Id : 76439011691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the length of the seconds pendulum on a planet having 'g' value $1/6^{th}$ of the value of the earth

**Options :**

76439046665. ✖ 0.15 meters

76439046666. ✖ 1.5 meters

76439046667. ✖ 2 meters

76439046668. ✔ 0.165 meters

**Question Number : 68 Question Id : 76439011692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A particle is executing SHM on a line of length 0.1 m. If the velocity of the particle while passing the mean position is 0.2 m/s. time period of the particle is

**Options :**

76439046669. ✔ 1.57 sec

76439046670. ✖ 2.57 sec

76439046671. ✖ 2 sec

76439046672. ✖ 3 sec

**Question Number : 69 Question Id : 76439011693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The frequency range of the audible sounds is

**Options :**

76439046673. ✖ 20KHz to 20MHz

76439046674. ✔ 20Hz to 20,000 Hz

76439046675. ✖ Less than 20 Hz

76439046676. ✖ Greater than 20,000 Hz

**Question Number : 70 Question Id : 76439011694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Accordingly to Doppler effect. If source is in motion towards listener with velocity $V_s$ and listener is at rest then equation of apparent frequency is ($n_o$ = Actual frequency, v= velocity of sound, n= Apparent frequency)

**Options :**

76439046677. ✔ $n = \frac{n_o V}{V - V_s}$

76439046678. ✖ $n = \frac{n_o (V - V_s)}{V}$

76439046679. ✖ $n = \frac{nV}{V_o}$

76439046680. ✖ $n = \frac{nV_o}{V}$

**Question Number : 71 Question Id : 76439011695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A soap bubble is blown to a radius of 3cm. if it to be further blown to a radius of 4 cm. Then what is the work done :( T= 3.06 x $10^2$ N/m)

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

**Options :**

76439046681. $450 \times 10^{-6}$ J

76439046682. $330 \times 10^{-4}$ J

76439046683. $5 \times 10^{-6}$ J

76439046684. $539.6 \times 10^{-6}$ J

**Question Number : 72 Question Id : 76439011696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A steel wire of 2mm diameter is stretched by applying a force of 72N, then the stress in the wire

**Options :**

76439046685. ✖ $16.6 \times 10^6$ N/m$^2$

76439046686. ✖ $20 \times 10^6$ N/m$^2$

76439046687. ✔ $2.292 \times 10^7$ N/m$^2$

76439046688. ✖ $32 \times 10^7$ N/m$^2$

**Question Number : 73 Question Id : 76439011697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A bar magnet of magnetic moment $\vec{M}$ is placed in a magnetic field of induction $\vec{B}$ , the torque exerted on it is

**Options :**

76439046689. ✔ $\vec{M} \times \vec{B}$

76439046690. ✖ $\overline{B} \times \overline{M}$

76439046691. ✖ $\overline{M} \cdot \overline{B}$

76439046692. ✖ $-\overline{M} \cdot \overline{B}$

**Question Number : 74 Question Id : 76439011698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The magnetism of magnet is due to

**Options :**

76439046693. ✖ Earth

76439046694. ✖ Cosmic rays

76439046695. ✔ Spin motion of electron

76439046696. ✖ Pressure of big magnet inside the earth

**Question Number : 75 Question Id : 76439011699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In a meter bridge experiment the ratio of the left gap resistance to right gap resistance is 3:2, the balance point from left is

**Options :**

76439046697. ✖ 50 centimetres

76439046698. ✔ 60 centimetres

76439046699. ✖ 30 centimetres

76439046700. ✖ 40 centimetres

## Chemistry

**Section Id :** 764390229
**Section Number :** 3

| | |
|---|---|
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 25 |
| **Number of Questions to be attempted :** | 25 |
| **Section Marks :** | 25 |
| **Display Number Panel :** | Yes |
| **Group All Questions :** | Yes |
| **Mark As Answered Required? :** | Yes |
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 764390259 |
| **Question Shuffling Allowed :** | Yes |

**Question Number : 76 Question Id : 76439011700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | |
|---|---|
| A. Principle quantum number | 1. The electron spin may be either in clock wise or anticlockwise direction |
| B. Azimuthal quantum number | 2. Gives the number of orbitals in each sublevel |
| C. Magnetic quantum number | 3. Determines shape of the electrons orbital |
| D. Spin quantum number | 4. Indicates the size of the orbit |

Choose the correct option from the following:

**Options :**

76439046701. ✖ A-2, B-1, C-4, D-3

76439046702. ✔ A-4, B-3, C-2, D-1

76439046703. ✖ A-4, B-3, C-1, D-2

76439046704. ✖ A-3, B-2, C-4, D-1

**Question Number : 77 Question Id : 76439011701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Select the incorrect statement from the following options.

**Options :**

76439046705. ✖ Atomic number is equal to no of electrons

76439046706. ✔ Mass number is equal to number of protons plus number of electrons

76439046707. ✖ Number of neutrons is the difference between mass number and atomic number

76439046708. ✖ Nucleus of an atom consist protons and neutrons

**Question Number : 78 Question Id : 76439011702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which one of the following statements is false?

**Options :**

76439046709. ✖ The oxidation number of oxygen in peroxide is '-1'

76439046710. ✖ The oxidation number of hydrogen in hydrides is negative

76439046711. ✔ The oxidation number of F, Cl, Br, I is always +1

76439046712. ✖ The oxidation number of a free element is zero

**Question Number : 79 Question Id : 76439011703 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the required volume of water to prepare 1.8 M $H_2SO_4$ solution from 250 ml of 9M $H_2SO_4$ solution?

**Options :**

76439046713. ✖ 750ml

76439046714. ✖ 500 ml

76439046715. ✖ 250 ml

76439046716. ✔ 1000 ml

**Question Number : 80 Question Id : 76439011704 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the gram equivalent weight (G.E.W) of oxalic acid?

**Options :**

76439046717. ✖ 90gm

76439046718. ✖ 85 gm

76439046719. ✔ 45 gm

76439046720. ✖ 55 gm

**Question Number : 81 Question Id : 76439011705 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following compounds are Lewis acids

**Options :**

76439046721. ✖ $H_2$, $NH_3$, NaOH

76439046722. ✖ $CH_3COOH$, $Cl^-$, $OH^-$

76439046723. ✖ $C_6H_6$, $N_2$, $CH_3OH$

76439046724. ✔ $FeCl_3$, $BCl_3$, H+

**Question Number : 82 Question Id : 76439011706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

pH value of 0.01 M HCl solution is

**Options :**

76439046725. ✔ 2

76439046726. ✖ 1

76439046727. ✖ 4

76439046728. ✖ 3

**Question Number : 83 Question Id : 76439011707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | |
|---|---|
| (i) Ionic product of water | (a) $NH_4Cl + NH_4OH$ |
| (ii) Basic buffer | (b) $CH_3COOH + CH_3COONa$ |
| (iii) Bronsted Base | ( c) $[H^+]\ [OH^-]$ |
| (iv) Acidic buffer | (d) $NH_3$ |

Choose the correct option from the following:

**Options :**

76439046729. ✖ i-a, ii-b, iii-c, iv-d

76439046730. ✖ i-d, ii-c, iii-b, iv-a

76439046731. ✔ i-c, ii-a, iii-d, iv-b

76439046732. ✖ i-b, ii-d, iii-a, iv-c

**Question Number : 84 Question Id : 76439011708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | |
|---|---|
| (i) Froth floatation process | (a) Regular supply of air |
| (ii) Roasting | (b) Pyro chemical process |
| (iii) Calcination | (c) Sulphide ores |
| (iv) Smelting | (d) Absence of air |

Choose the correct option from the following:

**Options :**

76439046733. ✔ i-c, ii-a, iii-d, iv-b

76439046734. ✖ i-c, ii-d, iii-b, iv-a

76439046735. ✖ i-b, ii-a, iii-c, iv-d

76439046736. ✖ i-a, ii-d, iii-c, iv-b

**Question Number : 85 Question Id : 76439011709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

German silver consists of

**Options :**

76439046737. ✖ Zn, Ni, Mn

76439046738. ✖ Cu, Al, Ni

76439046739. ✔ Cu, Zn, Ni

76439046740. ✖ Fe, Cu, Ni

**Question Number : 86 Question Id : 76439011710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Electrolyte that is present in salt bridge of Galvanic cell is

**Options :**

76439046741. ✖ NaCl aqueous

76439046742. ✖ Fused Nacl

76439046743. ✔ KCl

76439046744. ✖ HCl

**Question Number : 87 Question Id : 76439011711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following electrode has highest oxidation potential value in electro chemical series?

**Options :**

76439046745. ✖ Hydrogen

76439046746. ✔ Lithium

76439046747. ✖ Copper

76439046748. ✖ Gold

**Question Number : 88 Question Id : 76439011712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Statement a: Pure metal resists corrosion

Statement b: Electro chemical theory of corrosion of metal is done in dry environment

Choose the correct option from the following:

**Options :**

76439046749. ✖ Both the statements are correct

76439046750. ✖ Both the statements are incorrect

76439046751. ✖ Statement 'a' is incorrect, 'b' is correct

76439046752. ✔ Statement 'a' is correct, 'b' is incorrect

**Question Number : 89 Question Id : 76439011713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In sacrificial anodic protection method the metal that saves steel pipes from corrosion is

**Options :**

76439046753. ✖ Copper

76439046754. ✔ Magnesium

76439046755. ✖ Gold

76439046756. ✖ Cadmium

**Question Number : 90 Question Id : 76439011714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | |
|---|---|
| (i) $CO_2$, $SO_2$ gases with humidity | (a) pH = 11 |
| (ii) Zn Corrodes maximum | (b) pH = 5.5 |
| (iii) Al corrodes minimum | (c) Galvanic corrosion |
| (iv) Zn corrodes minimum | (d) pH > 11 |

Choose the correct option from the following:

**Options :**

76439046757. ✖ i-c, ii-b, iii-d, iv-a

76439046758. ✖ i-c, ii-a, iii-d, iv-b

76439046759. ✔ i-c, ii-d, iii-b, iv-a

76439046760. ✖ i-c, ii-b, iii-a, iv-d

**Question Number : 91 Question Id : 76439011715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Permanent Hardness of water is due to

**Options :**

76439046761. ✖ Hydroxides

76439046762. ✖ Bicarbonates

76439046763. ✔ Chlorides

76439046764. ✖ Carbonates

**Question Number : 92 Question Id : 76439011716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is Unit of hardness of water

**Options :**

76439046765. ✖ mg

76439046766. ✔ ppm

76439046767. ✖ cm

76439046768. ✖ Siemens

**Question Number : 93 Question Id : 76439011717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The solvent moves from low concentration to higher concentration through a semi permeable membrane, the process in known as

**Options :**

76439046769. ✔ Osmosis

76439046770. ✖ Reverse Osmosis

76439046771. ✖ Electrodialysis

76439046772. ✖ Flash distillation

**Question Number : 94 Question Id : 76439011718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The monomers in the preparation of Nylon 6:6 are

**Options :**

76439046773. ✖ Vinyl chloride and Hexamethylene diamine

76439046774. ✖ Styrene and Adipic acid

76439046775. ✖ Phenol and Formaldehyde

76439046776. ✔ Adipic acid and Hexamethylene diamine

**Question Number : 95 Question Id : 76439011719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Natural rubber is composed of _____ monomer units

**Options :**

76439046777. ✖ Isobutylene

76439046778. ✖ Isopropylene

76439046779. ✔ Isoprene

76439046780. ✖ Butadiene

**Question Number : 96 Question Id : 76439011720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Polychloroprene is also known as

**Options :**

76439046781. ✔ Neoprene

76439046782. ✖ Butyl rubber

76439046783. ✖ Buna-S

76439046784. ✖ PVC

**Question Number : 97 Question Id : 76439011721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | |
|---|---|
| 1. Water gas | A. Consist $N_2$ 52 to 55 % |
| 2. Producer gas | B. Consist of 5% non-combustible gases |
| 3. Coal gas | C. used in industrial and domestic purposes |
| 4. Natural gas | D. A mixture of CO 41% and Hydrogen 51% |

Choose the correct option from the following:

**Options :**

76439046785. ✔ 1-D, 2-A, 3-B, 4-C

76439046786. ✖ 1-D, 2-A, 3-C, 4-B

76439046787. ✖ 1-B, 2-A, 3-D, 4-C

76439046788. ✖ 1-C, 2-A, 3-D, 4-B

**Question Number : 98 Question Id : 76439011722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The air pollution caused during the Bhopal gas tragedy was by the release of _____

**Options :**

76439046789. ✖ Methyl cyanide

76439046790. ✖ Ethyl Isocyanate

76439046791. ✖ Hydrogen Cyanide

76439046792. ✔ Methyl Isocyanate

**Question Number : 99 Question Id : 76439011723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following gases is not a green house gas?

**Options :**

76439046793. ✔ Carbon monoxide

76439046794. ✖ Ozone

76439046795. ✖ Methane

76439046796. ✖ Water vapour

**Question Number : 100 Question Id : 76439011724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Match the following

| | | |
|---|---|---|
| i. | Aerosols | A. Vinyl Chloride |
| ii. | Pesticides | B. Consist of fine particles of organic and inorganic compounds |
| iii. | Carcinogens | C. Causes chronic cellular damage in man and animals |
| iv. | Radio active pollutants | D. Absorbed by plants through Soil and effects on living organisms |

Choose the correct option from the following:

**Options :**

76439046797. ✔ i-B, ii-D, iii-A, iv-C

76439046798. ✖ i-D, ii-B, iii-A, iv -C

76439046799. ✖ i-D, ii-A, iii-B, iv-C

76439046800. ✖ i-B, ii-C, iii-D, iv-A

## Computer Science and Engineering

| | |
|---|---|
| **Section Id :** | 764390230 |
| **Section Number :** | 4 |
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 100 |
| **Number of Questions to be attempted :** | 100 |
| **Section Marks :** | 100 |
| **Display Number Panel :** | Yes |
| **Group All Questions :** | Yes |
| **Mark As Answered Required? :** | Yes |
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 764390260 |
| **Question Shuffling Allowed :** | Yes |

**Question Number : 101 Question Id : 76439011725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The output of NOR gate is _____

**Options :**

76439046801. ✖ High, if all of its inputs are high

76439046802. ✔ High, of all of its inputs are low

76439046803. ✖ Low, if all of its inputs are low

76439046804. ✔ Low, if all of its inputs are High

**Note: For this question, ambiguity is found in question/answer. Candidate will get full marks for this question if any of the correct options are chosen.**

**Question Number : 102 Question Id : 76439011726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The operation that is not performed by the CPU is _____.

**Options :**

76439046805. ✖ Logic operation

76439046806. ✖ Arithmetic operation

76439046807. ✔ data transfer

76439046808. ✖ shift operation

**Question Number : 103 Question Id : 76439011727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Handshaking functions are performed in PPI 8255 by using _____ port.

**Options :**

76439046809. ✖ Port A

76439046810. ✖ Port B

76439046811. ✔ Port C

76439046812. ✖ Port D

**Question Number : 104 Question Id : 76439011728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

8086 is a _____ bit microprocessor.

**Options :**

76439046813. ✖ 4-bit

76439046814. ✖ 8-bit

76439046815. ✔ 16-bit

76439046816. ✖ 32- bit

**Question Number : 105 Question Id : 76439011729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

8086 microprocessor can operate in _____ mode(s).

**Options :**

76439046817. ✖ single

76439046818. ✔ dual

76439046819. ✖ tristate

76439046820. ✖ quad state

**Question Number : 106 Question Id : 76439011730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

BIU uses a mechanism as instruction stream that is used to implement _____architecture.

**Options :**

76439046821. ✔ Pipeline

76439046822. ✖ RISC

76439046823. ✖ CISC

76439046824. ✖ Serial

**Question Number : 107 Question Id : 76439011731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ block doesn't come under the architecture of 80286.

**Options :**

76439046825. ✔ control unit

76439046826. ✖ address unit

76439046827. ✖ execution unit

76439046828. ✖ bus interface unit

**Question Number : 108 Question Id : 76439011732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A 4-variable Kaurnaugh map will contain _____ cells.

**Options :**

76439046829. ✖ 2

76439046830. ✖ 4

76439046831. ✖ 8

76439046832. ✔ 16

**Question Number : 109 Question Id : 76439011733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

f= (xyz +x`yz+ xy`z+ …..) is called as _____.

**Options :**

76439046833. ✖ sum of the squares

76439046834. ✖ product of the sums

76439046835. ✔ sum of products

76439046836. ✖ products of the squares

**Question Number : 110 Question Id : 76439011734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Karnaugh map is a tool for representing Boolean functions of up to _____ variables.

**Options :**

76439046837. ✖ 2

76439046838. ✖ 4

76439046839. ✖ 5

76439046840. ✔ 6

**Question Number : 111 Question Id : 76439011735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Sign flag of 8086 microprocessor is set to 1, when the result of any computation is _____.

**Options :**

76439046841. ✔ negative

76439046842. ✖ positive

76439046843. ✖ zero

76439046844. ✖ unsigned

**Question Number : 112 Question Id : 76439011736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Maximum mode of 8086 microprocessor uses _____ number of processors.

**Options :**

76439046845. ✖ Zero

76439046846. ✔ One or More than

76439046847. ✖ Only One

76439046848. ✖ No processor

**Question Number : 113 Question Id : 76439011737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

MOV CX, AX

SUB AL, BL

is an example of _____ Addressing mode.

**Options :**

76439046849. ✖ Immediate.

76439046850. ✔ Register.

76439046851. ✖ Register Indirect.

76439046852. ✖ Indexed.

**Question Number : 114 Question Id : 76439011738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ instruction is used to convert two unpacked BCD digits in AH and AL to equivalent binary number in AL.

**Options :**

76439046853. ✖ ADD

76439046854. ✖ ACD

76439046855. ✖ ADC

76439046856. ✔ AAD

**Question Number : 115 Question Id : 76439011739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

REP-Repeat Instruction prefix uses _____ register to decrement.

**Options :**

76439046857. ✖ AX

76439046858. ✖ BX

76439046859. ✔ CX

76439046860. ✖ DX

**Question Number : 116 Question Id : 76439011740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

DMA data transfer is initiated only after receiving _____ signal from the CPU.

**Options :**

76439046861. ✖ ACK

76439046862. ✔ HLDA

76439046863. ✖ ALE

76439046864. ✖ BHE

**Question Number : 117 Question Id : 76439011741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

IC 8279 CPU interface section requires internal address _____for selecting data buffer.

**Options :**

76439046865. ✔ A=0

76439046866. ✖ A=1

76439046867. ✖ B=0

76439046868. ✖ B=1

**Question Number : 118 Question Id : 76439011742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ microprocessor uses multiplexed data and address lines.

**Options :**

76439046869. ✖ 80286

76439046870. ✖ 80486

76439046871. ✖ 80386

76439046872. ✔ 8086

**Question Number : 119 Question Id : 76439011743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

80486 Microprocessor is packaged in a _____ pin grid array package.

**Options :**

76439046873. ✖ 132

76439046874. ✔ 168

76439046875. ✖ 64

76439046876. ✖ 32

**Question Number : 120 Question Id : 76439011744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The non-maskable interrupt input requests a _____ interrupt.

**Options :**

76439046877. ✖ Type 1

76439046878. ✔ Type 2

76439046879. ✖ Type 3

76439046880. ✖ Type 4

**Question Number : 121 Question Id : 76439011745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$(1011001)_2 = (\quad ? \quad)_{\text{Excess 3}}$

**Options :**

76439046881. ✖ 1001 0001

76439046882. ✖ 0001 1010

76439046883. ✔ 1011 1100

76439046884. ✖ 1110 0010

**Question Number : 122 Question Id : 76439011746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

$(1458)_{10} = (\ ?\ )_{16}$

**Options :**

76439046885. ✔ 5B2

76439046886. ✖ 55B

76439046887. ✖ 65B

76439046888. ✖ B65

**Question Number : 123 Question Id : 76439011747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ feature should be included in cache memory organization.

**Options :**

76439046889. ✖ Variable point

76439046890. ✖ Fixed point

76439046891. ✖ Switching

76439046892. ✔ High space utilization

**Question Number : 124 Question Id : 76439011748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The 2's compliment form of the number 1010 is _____.

**Options :**

76439046893. ✖ 1100.

76439046894. ✔ 0110.

76439046895. ✖ 0111.

76439046896. ✖ 1011.

**Question Number : 125 Question Id : 76439011749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The performance of cache memory is frequently measured in terms of a quantity called _____.

**Options :**

76439046897. ✖ Miss ratio.

76439046898. ✖ Hit ratio.

76439046899. ✔ Latency ratio.

76439046900. ✖ Read ratio.

**Question Number : 126 Question Id : 76439011750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Abbreviate MIMD:

**Options :**

76439046901. ✔ Multiple instruction streams, multiple data streams

76439046902. ✖ Multiple instruction strings, multiple data streams

76439046903. ✖ Multiple instruction stack, multiple data streams

76439046904. ✖ Multiple instruction streams, multiple data stack

**Question Number : 127 Question Id : 76439011751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The offset used in the conditional branching is _____ bit.

**Options :**

76439046905. ✔ 24

76439046906. ✖ 32

76439046907. ✖ 16

76439046908. ✖ 8

**Question Number : 128 Question Id : 76439011752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Vector processors are also known as _____ processors.

**Options :**

76439046909. ✖ structure processors

76439046910. ✖ multi processors

76439046911. ✖ sharm processors

76439046912. ✔ array Processors

**Question Number : 129 Question Id : 76439011753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Programmed input–output is a method of transferring data between _____.

**Options :**

76439046913. ✖ CPU and memory

76439046914. ✔ CPU and a peripheral

76439046915. ✖ Memory and peripheral

76439046916. ✖ Memory and input device

**Question Number : 130 Question Id : 76439011754 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Memory access time of a CPU is always _____ than the access time of any memory device.

**Options :**

76439046917. ✖ longer

76439046918. ✔ shorter

76439046919. ✖ equal to

76439046920. ✖ depends on compiler

**Question Number : 131 Question Id : 76439011755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The unsigned long requires _____ of storage size.

**Options :**

76439046921. ✖ 32 bytes

76439046922. ✖ 16 bytes

76439046923. ✔ 8 bytes

76439046924. ✖ 4 bytes

**Question Number : 132 Question Id : 76439011756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Assume A = $(60)_{10}$, calculate $(\sim A)_2$?

**Options :**

76439046925. ✖ 0000 1100

76439046926. ✖ 0011 1101

76439046927. ✖ 0011 0001

76439046928. ✔ 1100 0011

**Question Number : 133 Question Id : 76439011757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What operation is performed by the string function strcpy (s1, s2) ?

**Options :**

76439046929. ✔ Copies string s2 into string s1.

76439046930. ✖ Copies string s1 into string s2.

76439046931. ✖ Concatenates string s2 onto the end of string s1.

76439046932. ✖ Concatenates string s1 onto the end of string s2.

**Question Number : 134 Question Id : 76439011758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

For accessing a member of a structure_____ operator is used.

**Options :**

76439046933. ✖ ::

76439046934. ✖ ,

76439046935. ✔ .

76439046936. ✖ @

**Question Number : 135 Question Id : 76439011759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

DATE macro is used to print current date in _____ format

**Options :**

76439046937. ✖ HH:MM:SS

76439046938. ✔ MMM DD YYYY

76439046939. ✖ DD MMM YYYY

76439046940. ✖ YYYY DD MM

**Question Number : 136 Question Id : 76439011760 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Linked list elements are not stored at _____ locations.

**Options :**

76439046941. ✖ non-contiguous

76439046942. ✔ contiguous

76439046943. ✖ segmented

76439046944. ✖ variable

**Question Number : 137 Question Id : 76439011761 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The best time complexity of Insertion Sort is _____.

**Options :**

76439046945. ✖ O(n^2)

76439046946. ✖ $O(n)^2$

76439046947. ✖ O(n log n)

76439046948. ✔ O(n)

**Question Number : 138 Question Id : 76439011762 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Assume an array = {4, 5, 9, 10}. Bubble sort is used to sort the array elements. How many iterations will be done to sort the array?

**Options :**

76439046949. ✔ 4

76439046950. ✖ 3

76439046951. ✖ 2

76439046952. ✖ 1

**Question Number : 139 Question Id : 76439011763 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the worst case for linear search?

**Options :**

76439046953. ✖ O(n log n)

76439046954. ✔ O(ln)

76439046955. ✖ O(log n)

76439046956. ✖ O(1)

**Question Number : 140 Question Id : 76439011764 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ data structure is required for Breadth First Traversal.

**Options :**

76439046957. ✖ Stack

76439046958. ✖ Array

76439046959. ✔ Queue

76439046960. ✖ Tree

**Question Number : 141 Question Id : 76439011765 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

ATX motherboard uses _____ type of RAM.

**Options :**

76439046961. ✖ SODIMM

76439046962. ✖ SIMM

76439046963. ✔ DIMM

76439046964. ✖ SISI

**Question Number : 142 Question Id : 76439011766 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The main purpose of data link layer is to ensure _____.

**Options :**

76439046965. ✖ establishing of connection

76439046966. ✖ managing connections

76439046967. ✖ synchronizing and terminating sessions

76439046968. ✔ packets of information are passed on free of errors

**Question Number : 143 Question Id : 76439011767 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which layer provides the services to the user?

**Options :**

76439046969. ✔ application layer

76439046970. ✖ session layer

76439046971. ✖ presentation layer

76439046972. ✖ physical layer

**Question Number : 144 Question Id : 76439011768 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Bluetooth is an example of _____.

**Options :**

76439046973. ✖ Local Area Network

76439046974. ✔ Personal Private Network

76439046975. ✖ Virtual Area Network

76439046976. ✖ Wide Area Network

**Question Number : 145 Question Id : 76439011769 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

SMTP servers commonly use the Transmission Control Protocol on _____ port number.

**Options :**

76439046977. ✖ 52

76439046978. ✖ 26

76439046979. ✖ 24

76439046980. ✔ 25.

**Question Number : 146 Question Id : 76439011770 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following IP addresses belongs to class C ?

**Options :**

76439046981. ✖ 128.0.0.0

76439046982. ✔ 192.0.0.0

76439046983. ✖ 240.0.0.0

76439046984. ✖ 224.0.0.0

**Question Number : 147 Question Id : 76439011771 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ is the most widely used protocol for local area networks?

**Options :**

76439046985. ✔ Ethernet

76439046986. ✖ TCP/IP

76439046987. ✖ SMTP

76439046988. ✖ HTTP

**Question Number : 148 Question Id : 76439011772 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A MAC address is _____bytes long address.

**Options :**

76439046989. ✖ 16

76439046990. ✖ 8

76439046991. ✔ 6

76439046992. ✖ 2

**Question Number : 149 Question Id : 76439011773 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

An optical fiber is a _____ dielectric waveguide that transmits light along its axis

**Options :**

76439046993. ✔ Cylindrical

76439046994. ✖ Spherical

76439046995. ✖ Rounded

76439046996. ✖ Rectangular

**Question Number : 150 Question Id : 76439011774 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

FTP typically uses _____ port for communication.

**Options :**

76439046997. ✖ 80

76439046998. ✖ 8008

76439046999. ✖ 24

76439047000. ✔ 21

**Question Number : 151 Question Id : 76439011775 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A running program requests the service from the kernel of the operating system using a _____.

**Options :**

76439047001. ✔ system call

76439047002. ✖ function Call

76439047003. ✖ procedure Call

76439047004. ✖ interrupt Mechanism

**Question Number : 152 Question Id : 76439011776 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If the time quantum of the Round Robin (RR) CPU scheduling algorithm is too large, then it degenerates as _____.

**Options :**

76439047005. ✖ Shortest Job First (SJF)

76439047006. ✔ First Come First Served (FCFS)

76439047007. ✖ Shortest Remaining Time First (SRTF)

76439047008. ✖ Optimal (OPT) Algorithm

**Question Number : 153 Question Id : 76439011777 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following scheduler is invoked only once when a job is to be executed?

**Options :**

76439047009. ✖ Short-term Scheduler

76439047010. ✔ Long-term Scheduler

76439047011. ✖ Medium-term Scheduler

76439047012. ✖ Short-term Scheduler, Long-term Scheduler and Medium-term Scheduler

**Question Number : 154 Question Id : 76439011778 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

If m and n are number of resource types and number of processes respectively,

then the time complexity of Banker's algorithm for Deadlock Avoidance is _____

**Options :**

76439047013. ✖ O(mn)

76439047014. ✖ $O(m^2n^2)$

76439047015. ✖ $O(m^2n)$

76439047016. ✔ $O(mn^2)$

**Question Number : 155 Question Id : 76439011779 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The messages cannot be stored in the queue, so the senders must block until receivers accept the messages. This is termed as _____.

**Options :**

76439047017. ✔ Zero capacity

76439047018. ✖ Bounded capacity

76439047019. ✖ Unbounded capacity

76439047020. ✖ Multiple messages capacity

**Question Number : 156 Question Id : 76439011780 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following fragmentation problem exists in paging concept?

**Options :**

76439047021. ✔ Internal

76439047022. ✖ External

76439047023. ✖ Both Internal & External

76439047024. ✖ Neither Internal nor External

**Question Number : 157 Question Id : 76439011781 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the disadvantage of FIFO page replacement algorithm?

**Options :**

76439047025. ✖ Convoy Effect

76439047026. ✔ Belody's Anomaly

76439047027. ✖ Highest or Worst Page Fault Rate

76439047028. ✖ Complex to implement

**Question Number : 158 Question Id : 76439011782 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is not a disk scheduling algorithm?

**Options :**

76439047029. ✖ SSTF

76439047030. ✖ C-SCAN

76439047031. ✔ SRTF

76439047032. ✖ LOOK

**Question Number : 159 Question Id : 76439011783 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is false with respect to indexed disk-file allocation method:

**Options :**

76439047033. ✖ It supports both sequential and random access methods

76439047034. ✖ It eliminates the external fragmentation

76439047035. ✖ It has space overhead in the form of index blocks

76439047036. ✔ It is highly reliable

**Question Number : 160 Question Id : 76439011784 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is false with respect to Access Matrix, a protection concept?

**Options :**

76439047037. ✖ Rows represent domains, Columns represent objects

76439047038. ✔ Access (i, j) is the set of operations that a process executing in $Domain_j$ can invoke on $Object_i$

76439047039. ✖ Each column represents Access-control list for one object

76439047040. ✖ Each Row represents Capability List for each domain

**Question Number : 161 Question Id : 76439011785 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The data stored in the database is described by_____ level of abstraction in DBMS

**Options :**

76439047041. ✔ Logical

76439047042. ✖ Physical

76439047043. ✖ View

76439047044. ✖ Physical & View

**Question Number : 162 Question Id : 76439011786 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Multivalued attributes are represented by _____ in ER diagram.

**Options :**

76439047045. ✖ Double Rectangle

76439047046. ✖ Dashed Rectangle

76439047047. ✔ Double Ellipses

76439047048. ✖ Dash Ellipses

**Question Number : 163 Question Id : 76439011787 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following operation displays a relation in relation algebra?

**Options :**

76439047049. ✖ Select

76439047050. ✔ Projection

76439047051. ✖ Join

76439047052. ✖ Display

**Question Number : 164 Question Id : 76439011788 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following commands belongs to DDL Commands?

i. CREATE ii. ALTER

iii. DELETE iv. DROP v. GRANT

Choose the correct Option:

**Options :**

76439047053. ✖ i and v only

76439047054. ✖ i and iv only

76439047055. ✔ i, ii and iv only

76439047056. ✖ ii and iii only

**Question Number : 165 Question Id : 76439011789 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In which of the following Normal form, relational schema has no partial functional dependencies?

**Options :**

76439047057. ✖ 1 NF

76439047058. ✖ 3 NF

76439047059. ✖ BCNF

76439047060. ✔ 2 NF

**Question Number : 166 Question Id : 76439011790 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

A relational schema R is in 3 NF if every non-prime attribute of R is _____.

**Options :**

76439047061. ✖ Transitively dependent on every key

76439047062. ✖ Non transitively dependent on every key

76439047063. ✖ Fully functional dependent on every key

76439047064. ✔ Non transitively dependent on every key
&
Fully functional dependent on every key

**Question Number : 167 Question Id : 76439011791 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is not data type of SQL?

**Options :**

76439047065. ✖ time

76439047066. ✖ TIME STAMP

76439047067. ✔ DATESTAMP

76439047068. ✖ CLOB

**Question Number : 168 Question Id : 76439011792 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

SQL command for deleting index is_____.

**Options :**

76439047069. ✖ delete index < index-number>

76439047070. ✖ drop index <index number>

76439047071. ✖ delete index < index-name>

76439047072. ✔ drop index <index-name>

**Question Number : 169 Question Id : 76439011793 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The valid syntax of "for" loop in PL/SQL.

**Options :**

76439047073. ✖
```
for (i=1; i<10; i++)
Begin
//
End
```

76439047074. ✔
```
for i. IN 1 . . 10
LOOP
//
END LOOP;
```

76439047075. ✖
```
for i:1 to 10
Begin
//
End
```

76439047076. ✖
```
for i:1<10
{
//
}
```

**Question Number : 170 Question Id : 76439011794 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In PL/SQL, exception notification is done by_____ statement.

**Options :**

76439047077. ✖ throw

76439047078. ✖ notification

76439047079. ✔ RAISE

76439047080. ✖ Catch

**Question Number : 171 Question Id : 76439011795 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Data encapsulation means_____.

**Options :**

76439047081. ✖ Accessing data of one class into another class

76439047082. ✖ Hiding implementation details

76439047083. ✔ Grouping of data and methods into class

76439047084. ✖ Data acquiring from other class

**Question Number : 172 Question Id : 76439011796 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following symbol is preceded to define destructor?

**Options :**

76439047085. ✖ : :

76439047086. ✔ ~

76439047087. ✖ !

76439047088. ✖ &

**Question Number : 173 Question Id : 76439011797 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Syntax for deleting an array for which memory is allocated dynamically is _____.

**Options :**

76439047089. ✖ delete P

76439047090. ✖ delete P[5]

76439047091. ✔ delete [] P

76439047092. ✖ delete P[]

**Question Number : 174 Question Id : 76439011798 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is not a member dereferencing operator in C++?

**Options :**

76439047093. ✔ ::

76439047094. ✖ ::*

76439047095. ✖ *

76439047096. ✖ →*

**Question Number : 175 Question Id : 76439011799 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Operator function to overload unary decrement (--) operator is_____(assume point is a class)

**Options :**

76439047097. ✖ friend point operator--(point, point)

76439047098. ✔ friend void operator – (point &)

76439047099. ✖ friend void operator (point &, point)

76439047100. ✖ friend point operator – (point &, Point &)

**Question Number : 176 Question Id : 76439011800 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In function overloading, correct function is invoked based on_____.

**Options :**

76439047101. ✖ Number of arguments only

Number and Type of arguments only

76439047102. ✔

Number & type of arguments, return Type

76439047103. ✖

Return type only

76439047104. ✖

**Question Number : 177 Question Id : 76439011801 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Syntax of multiple inheritance in C++ is ____ (here A,B1,B2 are class names)

**Options :**

```
class A public B1 & B2
{
   //
 }
```

76439047105. ✖

```
class A extends B1, B2
{
        //
}
```

76439047106. ✖

```
class A public B1, public B2
{
        //
 }
```

76439047107. ✔

```
class A:: public B1 , public B2
{
 //
}
```

76439047108. ✖

**Question Number : 178 Question Id : 76439011802 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Valid syntax of pure virtual function declaration is _____

**Options :**

```
virtual void xyz
  {
    //
  }
```

76439047109. ✖

```
virtual void xyz=0;
```

76439047110. ✔

```
void virtual xyz
{
  //
}
```

76439047111. ✖

```
void virtual xyz=0;
```

76439047112. ✖

**Question Number : 179 Question Id : 76439011803 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following seekg() function moves file pointer backwards 30 bytes from current location?

**Options :**

seekg(ios:: cur-30)

76439047113. ✖

seekg(ios cur::-30)

76439047114. ✖

seekg(-30+ios::cur)

76439047115. ✖

seekg(-30, ios::cur)

76439047116. ✔

**Question Number : 180 Question Id : 76439011804 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ ios function fills with a specified character in unused portion of output field of text.

**Options :**

setfill( )

76439047117. ✖

setf( )

76439047118. ✖

76439047119. ✔ fill( )

76439047120. ✖ fillc( )

**Question Number : 181 Question Id : 76439011805 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The memory size of character in Java is_____.

**Options :**

76439047121. ✔ 16 bits

76439047122. ✖ 8 bits

76439047123. ✖ 4 bits

76439047124. ✖ 8 bytes

**Question Number : 182 Question Id : 76439011806 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

">>>" operator in Java represents_____.

**Options :**

76439047125. ✖ Shift right operation

76439047126. ✖ Double shift operation

76439047127. ✔ Shift right zero fill operation

76439047128. ✖ Shift right assignment operation

**Question Number : 183 Question Id : 76439011807 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following key word represents the invoking of current object?

**Options :**

76439047129. ✖ super

76439047130. ✔ this

76439047131. ✖ static

76439047132. ✖ curr

**Question Number : 184 Question Id : 76439011808 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The valid syntax constructor in Java is_____.

**Options :**

76439047133. ✖
```
Returntype classname( )
{
  //
}
```

76439047134. ✖
```
void classname ( )
  {
  //
   }
```

76439047135. ✖
```
Returntype classname(void)
  {
  //
   }
```

76439047136. ✔
```
classname ( )
{
//
}
```

**Question Number : 185 Question Id : 76439011809 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following variable is also known as class variable?

**Options :**

76439047137. ✖ Local variable

76439047138. ✔ static variable

76439047139. ✖ final variable

76439047140. ✖ global variable

**Question Number : 186 Question Id : 76439011810 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In java, multiple inheritance is implemented is by using_____.

**Options :**

76439047141. ✔ interface

76439047142. ✖ abstract class

76439047143. ✖ class

76439047144. ✖ Inner class

**Question Number : 187 Question Id : 76439011811 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

What is the output of the following code?

```
class X
 {
void show( )
     {
System.out.print("Hai x ");
}
  }
class Y extends X
    {
void show( )
     {
System .out.print("Hai y");
}
  }
class Test
          {
public static void main( )
     {
Y obj = new Y( );
Y. show( );
     }
  }
```

Output:

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

**Options :**

76439047145. Hai x

76439047146. Hai x Hai y

76439047147. Hai y Hai x

76439047148. Hai y

**Question Number : 188 Question Id : 76439011812 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following is checked exception in Java?

**Options :**

76439047149. ✔ Illegal access exception

Null pointer exception

76439047150. ✖

String index out of bounds exception

76439047151. ✖

Arithmetic exception

76439047152. ✖

**Question Number : 189 Question Id : 76439011813 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

Return of execute update ( ) statement in JDBC is _____.

**Options :**

Result set

76439047153. ✖

void

76439047154. ✖

int

76439047155. ✔

boolean

76439047156. ✖

**Question Number : 190 Question Id : 76439011814 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

_____ method ensures that main thread is the last to stop in Java thread?

**Options :**

live( )

76439047157. ✖

stopfinal( )

76439047158. ✖

killfinal( )

76439047159. ✖

join( )

76439047160. ✔

**Question Number : 191 Question Id : 76439011815 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 1 Wrong Marks : 0**

_____ tag adds super script to text in HTML.

**Options :**

76439047161. ✔ <sup> </sup>

76439047162. ✖ <super> </super>

76439047163. ✖ <sscript> </sscript>

76439047164. ✖ <sup_script> < /sup_script>

**Question Number : 192 Question Id : 76439011816 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

HTML tag for setting background image in table is _____.

**Options :**

76439047165. ✖ <table width=80%> < td background = “x.img”></td></table>

76439047166. ✖ <table width=80%> < background = “x.img”> </background></table>

76439047167. ✔ <table width=80% background = “x.img”> </table>

76439047168. ✖ <background = “x.img”> <table with=80%> </table> </background>

**Question Number : 193 Question Id : 76439011817 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Syntax to add external style sheet to HTML file is _____.

**Options :**

76439047169. ✖ <a href = "x.css"></ahref>

76439047170. ✖ <add href= "x.css"> </ add>

76439047171. ✔ <link rel = "style sheet" href = "x.css"/>

<link href = "x.css" align = "centre"/>

76439047172. ✖

**Question Number : 194 Question Id : 76439011818 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In CSS, _____ property can place the image in middle with respect to baseline.

**Options :**

76439047173. ✖ Image -Align

76439047174. ✔ Vertical -Align

76439047175. ✖ Horizontal -Align

76439047176. ✖ Middle-Align

**Question Number : 195 Question Id : 76439011819 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

In Javascript, _____ function divides the string into small strings by separating the characters.

**Options :**

76439047177. ✖ substring( )

76439047178. ✔ split( )

76439047179. ✖ getTokens( )

76439047180. ✖ divide( )

**Question Number : 196 Question Id : 76439011820 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following syntax is correct to create an array in Javascript?

I. var M = {"JNTU","KU","OU","HCU"}

II. var M = ["JNTU","KU","OU","HCU"]

III. var M = new Array ("JNTU","KU","OU","HCU")

IV. var M = ("JNTU","KU","OU","HCU")

Choose the correct option:

**Options :**

76439047181. ✖ I only

76439047182. ✔ II & III only

76439047183. ✖ III & IV only

76439047184. ✖ I, II, & III only

**Question Number : 197 Question Id : 76439011821 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

Which of the following operator does not belongs to Javascript?

**Options :**

76439047185. ✖ !=

76439047186. ✖ >=

76439047187. ✖ ||

76439047188. ✔ ?:

**Question Number : 198 Question Id : 76439011822 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

_____ function adds elements at the end of the array in PHP.

**Options :**

76439047189. ✖ array_end( )

76439047190. ✖ array_append( )

76439047191. ✔ array_push( )

76439047192. ✖ array_inserted( )

**Question Number : 199 Question Id : 76439011823 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The syntax of "foreach" loop in PHP is _____.

**Options :**

76439047193. ✔ foreach($x as $ value)

76439047194. ✖ foreach($ x in $ value)

76439047195. ✖ foreach($ x : $ value)

76439047196. ✖ foreach($ x to $ value)

**Question Number : 200 Question Id : 76439011824 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**
**Correct Marks : 1 Wrong Marks : 0**

The output of date format with echo (date ("D ds M, Y") is _____.

**Options :**

76439047197. ✖ 25 MON NOV, 2020

76439047198. ✖ MON 25 NOV, 2020

76439047199. ✖ MONDAY 25 NOVEMBER ,2020

76439047200. ✔ MON 25th NOV, 2020