

Question Paper Preview

Question Paper Name:

Computer Science and Engineering

Subject Name:

Computer Science and Engineering

Number of Questions:

Display Number Panel:

Group All Questions:

Mathematics

50

Yes

No

Question Number : 1 Question Id : 67809417424 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\text{If } A = \begin{pmatrix} 2 & -1 & 0 \\ 3 & 4 & 7 \end{pmatrix} \text{ and } B = \begin{pmatrix} 5 & 2 & -3 \\ 1 & 0 & -2 \end{pmatrix} \text{ then } 2A+3B =$$

Options :

1. $\begin{pmatrix} 19 & 4 & -9 \\ 9 & 8 & 8 \end{pmatrix}$

2. $\begin{pmatrix} -19 & -4 & 9 \\ 9 & 8 & -8 \end{pmatrix}$

3. $\begin{pmatrix} 18 & 4 & -9 \\ 9 & 8 & 8 \end{pmatrix}$

4. $\begin{pmatrix} 17 & 5 & -9 \\ 8 & 8 & 9 \end{pmatrix}$

Question Number : 2 Question Id : 67809417425 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$$\text{If } A = \begin{pmatrix} 2 & -3 & 0 \\ 1 & 4 & -1 \end{pmatrix} \text{ and } B = \begin{pmatrix} 6 & 1 \\ 3 & 0 \\ 5 & 2 \end{pmatrix} \text{ then } (AB)^T =$$

Options :

1. $A^T B^T$

2. $B^T A^T$

3. $(BA)^T$

4. AB^T

Question Number : 3 Question Id : 67809417426 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If two rows or two columns of a determinant are identical then the value of the determinant is

Options :

1. 2

2. -1

3. 0

4. -2

Question Number : 4 Question Id : 67809417427 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\begin{vmatrix} 265 & 240 & 219 \\ 240 & 225 & 198 \\ 219 & 198 & 181 \end{vmatrix}$ is

Options :

1. -1

2. 0

3. 1

4. 2

Question Number : 5 Question Id : 67809417428 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The adjoint of the square matrix $A = \begin{pmatrix} 2 & 5 & 1 \\ 3 & 1 & 2 \\ 4 & 3 & 1 \end{pmatrix}$ is

Options :

$$1. \begin{pmatrix} -5 & -2 & 9 \\ 5 & -2 & -1 \\ 5 & 14 & -13 \end{pmatrix}$$

$$2. \begin{pmatrix} 5 & 2 & 9 \\ 5 & -2 & -1 \\ 5 & 14 & -13 \end{pmatrix}$$

$$3. \begin{pmatrix} -5 & -2 & 9 \\ -5 & -2 & -1 \\ -5 & 14 & -13 \end{pmatrix}$$

$$4. \begin{pmatrix} -5 & -2 & -9 \\ 5 & 2 & 1 \\ 5 & 14 & -13 \end{pmatrix}$$

Question Number : 6 Question Id : 67809417429 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Resolve into partial fractions: $\frac{5}{(2x-1)(3x-1)} =$

Options :

$$1. \frac{8}{2x-1} + \frac{5}{3x-1}$$

$$2. \frac{10}{2x-1} - \frac{15}{3x-1}$$

$$3. \frac{11}{3x-1} + \frac{7}{2x-1}$$

$$4. \frac{1}{2x-1} + \frac{2}{3x-1}$$

Question Number : 7 Question Id : 67809417430 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Resolve into partial fractions: $\frac{3x-1}{(x-1)(x-2)(x-3)} =$

Options :

$$1. \frac{2}{x-1} + \frac{5}{x-2} - \frac{4}{x-3}$$

2. $\frac{-1}{x-1} + \frac{5}{x-2} - \frac{4}{x-3}$

3. $\frac{1}{x-1} + \frac{5}{x-2} + \frac{4}{x-3}$

4. $\frac{1}{x-1} - \frac{5}{x-2} + \frac{4}{x-3}$

Question Number : 8 Question Id : 67809417431 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\tan A = \frac{1}{2}$ and $\tan B = \frac{1}{3}$ then $\tan(A - B) =$

Options :

1. $\frac{1}{7}$

2. $\frac{-1}{7}$

3. $\frac{1}{5}$

4. $\frac{1}{3}$

Question Number : 9 Question Id : 67809417432 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\cot 2A + \tan A =$

Options :

1. $\sin 2A$

2. $\cos 2A$

3. $\sec 2A$

4. $\operatorname{cosec} 2A$

Question Number : 10 Question Id : 67809417433 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\frac{1-\cos 2A+\sin 2A}{1+\cos 2A+\sin 2A} =$

Options :

1. $\sin A$
2. $\cos A$
3. $\tan A$
4. $\cot A$

Question Number : 11 Question Id : 67809417434 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\sin \frac{\pi}{5} \sin \frac{2\pi}{5} \sin \frac{3\pi}{5} \sin \frac{4\pi}{5} =$

Options :

1. $\frac{4}{15}$
2. $\frac{5}{16}$
3. $\frac{-5}{16}$
4. $\frac{7}{15}$

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Question Number : 12 Question Id : 67809417435 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\cos 20^{\circ} + \cos 100^{\circ} + \cos 140^{\circ} =$

Options :

1. 0
2. 3
3. 1
4. -3

Question Number : 13 Question Id : 67809417436 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\sum a(b^2 + c^2)\cos A$ is

Options :

1. $2abc$
2. $4abc$
3. $3abc$
4. $5abc$

Question Number : 14 Question Id : 67809417437 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $(a - b)^2 \cos^2 \left(\frac{C}{2}\right) + (a + b)^2 \sin^2 \left(\frac{C}{2}\right)$ is

Options :

1. c^3
2. c
3. c^5
4. c^2

Question Number : 15 Question Id : 67809417438 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $2\tan^{-1} \left(\frac{1}{3}\right) + \tan^{-1} \left(\frac{1}{7}\right)$ is

Options :

1. $\pi/4$
2. $\pi/2$
3. $\pi/6$
4. $\pi/3$

Question Number : 16 Question Id : 67809417439 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The general solution of $4\cos^2x - 3 = 0$ is

Options :

1. $2n\pi \pm \frac{\pi}{6}$

2. $2n\pi \pm \frac{7\pi}{6}$

3. $3n\pi \pm \frac{5\pi}{6}$

4. $2n\pi \pm \frac{11\pi}{6}$

Question Number : 17 Question Id : 67809417440 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $\tan^{-1}x + \tan^{-1}y + \tan^{-1}z = \frac{\pi}{2}$, then the value of $xy + yz + zx$ is

Options :

1. -1

2. 3

3. 5

4. 1

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Question Number : 18 Question Id : 67809417441 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The modulus of a complex number $\sqrt{3} + i$ is

Options :

1. -2

2. 3

3. 2

4. 5

Question Number : 19 Question Id : 67809417442 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $x + \frac{1}{x} = 2 \cos \theta$ then the value of $x^n + \frac{1}{x^n}$ is

Options :

1. $2 \cos n\theta$
2. $-2 \cos n\theta$
3. $3 \cos \theta$
4. $2 \sin n\theta$

Question Number : 20 Question Id : 67809417443 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The centre of the circle: $x^2 + y^2 - 2x + 6y - 6 = 0$ is

Options :

1. (1,3)
2. (2,3)
3. (1,-3)
4. (-1,3)

Question Number : 21 Question Id : 67809417444 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The radius of the circle: $5x^2 + 5y^2 - 6x + 8y - 75 = 0$ is

Options :

1. -4
2. 4
3. 2
4. 3

Question Number : 22 Question Id : 67809417445 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The equation of the parabola with vertex (2, -1) and focus (2, -3) is

Options :

1. $x^2 - 4x + 8y + 12 = 0$

2. $x^2 - 4x - 8y - 12 = 0$

3. $x^2 + 4x - 8y - 12 = 0$

4. $x^2 + 5x - 8y - 11 = 0$

Question Number : 23 Question Id : 67809417446 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The centre of the ellipse: $9x^2 + 25y^2 - 18x + 100y - 116 = 0$ is

Options :

1. $(2, -1)$

2. $(-1, -2)$

3. $(1, -2)$

4. $(1, 2)$

Question Number : 24 Question Id : 67809417447 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The focus of the hyperbola: $\frac{x^2}{25} - \frac{y^2}{144} = 1$ is

Options :

1. $(-13, 0)$

2. $(13, 0)$

3. $(13, -1)$

4. $(13, 1)$

Question Number : 25 Question Id : 67809417448 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The length of the major axis of the ellipse: $4x^2 + 3y^2 = 48$ is

Options :

1. 10

2. 11

3. 8

4. 13

Question Number : 26 Question Id : 67809417449 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\lim_{x \rightarrow 1} \frac{x^3 - 1}{x - 1}$ is

Options :

1. 3

2. -3

3. 2

4. 1

Question Number : 27 Question Id : 67809417450 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = \frac{a+bx}{b-ax}$ then the derivative of y with respect to x is

Options :

1. $\frac{a^2+b^2}{(b-ax)^2}$

2. $\frac{a^2+b^2}{(b+ax)^2}$

3. $\frac{a^2-b^2}{(b-ax)^2}$

4. $\frac{a+b}{(b-ax)^2}$

Question Number : 28 Question Id : 67809417451 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = x^3 e^x$ then $\frac{dy}{dx}$ is

Options :

1. $(x - 3)x^2 e^x$

2. $(x - 2)x^3 e^x$

3. $(x + 3)x^2 e^x$

4. $(x - 1)x^3 e^x$

Question Number : 29 Question Id : 67809417452 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = \sec x + \tan x$ then $\frac{dy}{dx}$ is

Options :

1. $y \cos x$

2. $y \sec x$

3. $-y \sin x$

4. $y \tan x$

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Question Number : 30 Question Id : 67809417453 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = \frac{2+3 \sinh x}{3+2 \sinh x}$ then the derivative of y with respect to x is

Options :

1. $\frac{5 \cosh x}{(3+2 \sinh x)^2}$

2. $\frac{5 \sinh x}{(3+2 \sinh x)^2}$

3. $\frac{5 \sin x}{(3-2 \cosh x)^2}$

4. $\frac{\sinh^2 x}{(2-3\sinh x)^2}$

Question Number : 31 Question Id : 67809417454 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If $y = \sqrt{\frac{1-\cos x}{1+\cos x}}$ then $\frac{dy}{dx}$ is

Options :

1. $\sec^2\left(\frac{x}{2}\right)$

2. $\cos^2\left(\frac{x}{2}\right)$

3. $\frac{1}{2}\cos^2\left(\frac{x}{2}\right)$

4. $\frac{1}{2}\sec^2\left(\frac{x}{2}\right)$

Question Number : 32 Question Id : 67809417455 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The angle between the curves $y = x^2 + 3x - 7$ and $y^2 = 2x + 5$ at $(2,3)$ is

Options :

1. $\tan \theta = 2$

2. $\sec \theta = 2$

3. $\cos \theta = 1$

4. $\sin \theta = 3$

Question Number : 33 Question Id : 67809417456 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The range of x for which the function $x^3 - 3x^2 - 45x + 2$ is increasing with x is

Options :

1. $(3, -5)$

2. $(-3, -5)$

3. $(3, 5)$

4. $(-3, 5)$

Question Number : 34 Question Id : 67809417457 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The maximum value of the function $2x^3 - 12x^2 + 18x + 5$ is

Options :

1. 13

2. 12

3. 10

4. 15

Question Number : 35 Question Id : 67809417458 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If u is a homogeneous function of x and y with degree n then $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} =$

Options :

1. $-nu$

2. n^2u

3. nu

4. $nu^2 + u$

Question Number : 36 Question Id : 67809417459 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int \frac{\cos \sqrt{x}}{\sqrt{x}} dx$ is

Options :

1. $2 \sin \sqrt{x} + c$

2. $3 \sin \sqrt{x} + c$

3. $2 \sin x + c$

4. $\sin \sqrt{x} + c$

Question Number : 37 Question Id : 67809417460 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int \frac{dx}{\sqrt{a^2-x^2}}$ is

Options :

1. $\cos^{-1}\left(\frac{x}{a}\right) + c$

2. $\sin^{-1}\left(\frac{x}{a}\right) + c$

3. $\sinh^{-1}\left(\frac{x}{a}\right) + c$

4. $\sin^{-1}\left(\frac{a}{x}\right) + c$

Question Number : 38 Question Id : 67809417461 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int \frac{dx}{4x^2+4x+17}$ is

Options :

1. $\frac{1}{8} \tan^{-1}\left(\frac{2x+1}{4}\right) + c$

2. $\frac{1}{4} \cot^{-1}\left(\frac{2x+1}{4}\right) + c$

3. $\frac{1}{8} \sin^{-1}\left(\frac{2x+1}{4}\right) + c$

4. $\frac{1}{3} \tan^{-1}\left(\frac{2x+1}{4}\right) + c$

The value of $\int \log x \, dx$ is

Options :

1. $x \log x + x + c$
2. $x^2 \log x - x + c$
3. $x \log x - x + c$
4. $x \log x - \frac{x^2}{2} + c$

Question Number : 40 Question Id : 67809417463 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_1^4 \left(\sqrt{x} + \frac{1}{\sqrt{x}} \right) dx$ is

Options :

1. $\frac{20}{3}$
2. $-\frac{20}{3}$
3. $\frac{10}{3}$
4. $\frac{15}{3}$

Question Number : 41 Question Id : 67809417464 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\int_0^{\pi/2} \sin^2 x \, dx$ is

Options :

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

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3. $\frac{\pi}{6}$

4. $\frac{\pi}{4}$

Question Number : 42 Question Id : 67809417465 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The area enclosed between the curve $y^2 = 4ax$ and the line $x = 2y$ is

Options :

1. $\frac{64}{5}$ sq. units

2. $\frac{64}{3}$ sq. units

3. $\frac{65}{4}$ sq. units

4. $\frac{63}{4}$ sq. units

Question Number : 43 Question Id : 67809417466 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The value of $\lim_{n \rightarrow \infty} \left[\frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{n+n} \right]$ is

Options :

1. $\log 2$

2. $\log 3$

3. $-\log 2$

4. $\log n$

Question Number : 44 Question Id : 67809417467 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Form the differential equation by eliminating the arbitrary constant a from $ay^2 = x^3$

Options :

1. $\frac{dy}{dx} = \frac{3y}{2x}$

2. $\frac{dy}{dx} = \frac{2x}{3y}$

3. $\frac{dy}{dx} = \frac{x}{y}$

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

Question Number : 45 Question Id : 67809417468 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of $\sqrt{1-y^2}dx + \sqrt{1-x^2}dy = 0$ is

Options :

1. $\cos^{-1}x + \cos^{-1}y = c$

2. $\sinh^{-1}x + \cosh^{-1}y = c$

3. $\cos^{-1}x + \sec^{-1}x = c$

4. $\sin^{-1}x + \sin^{-1}y = c$

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Question Number : 46 Question Id : 67809417469 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of $\frac{dy}{dx} = (4x + y + 1)^2$ is

Options :

1. $\frac{1}{2} \tan^{-1} \left(\frac{4x+y+1}{2} \right) = x + c$

2. $\frac{1}{2} \cot^{-1} \left(\frac{4x+y+1}{2} \right) = x + c$

3. $-\frac{1}{2} \tan^{-1} \left(\frac{4x+y+1}{2} \right) = x + c$

4. $\frac{1}{2} \tan^{-1} \left(\frac{4x-y-1}{2} \right) = x + c$

Question Number : 47 Question Id : 67809417470 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of exact differential equation $2xy dx + x^2 dy = 0$ is

Options :

1. $x^2 y^2 = c$

2. $x^2 y = c$

3. $x^3 y = c$

4. $x^2 y^3 = c$

Question Number : 48 Question Id : 67809417471 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The solution of $\frac{dy}{dx} + y = e^{-x}$ is

Options :

1. $(x + c)e^{-x}$

2. $(x - c)e^x$

3. $(x + c)e^x$

4. $(x + c)e^{-2x}$

Question Number : 49 Question Id : 67809417472 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The particular integral of $(D^2 + 5D + 6)y = e^x$ is

Options :

1. $\frac{-e^{-x}}{12}$

2. $\frac{e^{2x}}{12}$

3. $\frac{e^x}{12}$

4. $\frac{e^x}{6}$

Question Number : 50 Question Id : 67809417473 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The complementary function of $(D^2 + 3D + 2)y = 8\sin 5x$ is

Options :

1. $c_1 e^{-x} + c_2 e^{-2x}$

2. $c_1 e^x + c_2 e^{2x}$

3. $c_1 e^{-x} + c_2 e^{2x}$

4. $c_1 e^{2x} + c_2 e^{3x}$

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Physics

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

Question Number : 51 Question Id : 67809417474 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not the unit of energy?

Options :

1. watt second

2. Pascal metre

3. Newton metre

4. Kilowatt hour

Question Number : 52 Question Id : 67809417475 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The height of Mercury barometer is 76 cm and density of Mercury is 13.6 g/cc. The corresponding height of water barometer in SI system is

Options :

1. 10.336 m

2. 103.36 m

3. 3.6m

4. 1.0336 m

Question Number : 53 Question Id : 67809417476 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Angle made by the vector $(\sqrt{3} \bar{i} + \bar{j})$ with the X-axis is

Options :

1. $\pi/2$

2. $\pi/4$

3. $\pi/3$

4. $\pi/6$

Question Number : 54 Question Id : 67809417477 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The minimum number of unequal forces in a plane that can keep a particle in equilibrium is

Options :

1. 4

2. 2
3. 3
4. 6

Question Number : 55 Question Id : 67809417478 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A body is thrown with a velocity of $(4\bar{i} + 3\bar{j})$ m/s. The maximum height attained by the body is ($g=10 \text{ ms}^{-2}$)

- Options :
1. 2.5 m
 2. 4.5 m
 3. 0.8 m
 4. 0.45 m

Question Number : 56 Question Id : 67809417479 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A person in a lift, which ascends up with acceleration 10ms^{-2} , drops a stone from a height of 10m. The time of descent is ($g=10 \text{ ms}^{-2}$)

- Options :
1. 0.5 s
 2. 1 s
 3. 1.5 s
 4. 2 s

Question Number : 57 Question Id : 67809417480 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For a projectile, the ratio of maximum height reached to the square of time of flight is

Options :

1. 5:4

2. 5:2

3. 5:1

4. 10:1

Question Number : 58 Question Id : 67809417481 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The ratio of distances travelled by a body, starting from rest and travelling with uniform acceleration, in successive intervals of time of equal duration will be

Options :

1. 1:2:3

2. 1:4:9

3. 1:3:5

4. 1:9:16

Question Number : 59 Question Id : 67809417482 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A force of 12 N acts on a body of mass 4 kg placed on a rough surface. The coefficient of friction between body and surface is 0.2 and take $g = 10 \text{ ms}^{-2}$. The acceleration of the body in

ms^{-2} is

Options :

1. 1

2. 0.5

3. 0.25

4. Zero

Question Number : 60 Question Id : 67809417483 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Brakes stop a train in a certain distance d . When the braking force is made one fourth, the

brakes will stop the train in a distance which is

Options :

1. $d/2$
2. $4d$
3. $2d$
4. d

Question Number : 61 Question Id : 67809417484 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The product of linear momentum and velocity of a body represents

Options :

1. Kinetic energy of the body
2. Potential energy of the body
3. Half the Kinetic energy of the body
4. Twice the kinetic energy of the body

Question Number : 62 Question Id : 67809417485 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A man weighing 60 kg eats plum cake whose energy content is 9800 calories. If all this energy could be utilised by him, he can ascend to a height of

Options :

1. 17 m
2. 100 m
3. 70 m
4. 60m

Question Number : 63 Question Id : 67809417486 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A crane can lift up 10,000 kg of coal in 1 hour from a mine of depth 180m. If the efficiency of the crane is 80%, its input power must be ($g=10 \text{ ms}^{-2}$)

Options :

1. 62.5 kW
2. 6.25 kW
3. 50 kW
4. 5 kW

Question Number : 64 Question Id : 67809417487 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The graph of acceleration as a function of displacement in the case of a body executing simple harmonic motion is

Options :

1. Parabola
2. Hyperbola
3. Straight line with positive slope
4. Straight line with negative slope

Question Number : 65 Question Id : 67809417488 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The pendulum of length 'L' swings from mean position to mean position 'n' times in one second. The value of acceleration due to gravity is

Options :

1. $\pi^2 n^2 L$
2. $2\pi^2 n^2 L$

3. $(\pi^2 n^2 L)/2$

4. $4\pi^2 n^2 L$

Question Number : 66 Question Id : 67809417489 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When a source of sound is in motion towards a stationary observer, the effect observed is

Options :

1. Decrease in velocity of sound
2. Increase in velocity of sound
3. increase in frequency of sound
4. decrease in frequency of sound

Question Number : 67 Question Id : 67809417490 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The voice of a male person is different from that of a female person because

Options :

1. Two sounds have different phases
2. Two persons are of different size
3. Two sounds travel with different velocities
4. Two sounds have different pitch

Question Number : 68 Question Id : 67809417491 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the sound absorption of a hall is changed by 2%, then the percentage change in the reverberation time is

Options :

1. 2%

2. 4%

3. 1%

4. No change

Question Number : 69 Question Id : 67809417492 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which of the following process, the internal energy of the system remains constant?

Options :

1. Adiabatic

2. Isothermal

3. Isobaric

4. Isochoric

Question Number : 70 Question Id : 67809417493 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Heat required to raise the temperature of one gram of water through 1 K is

Options :

1. 1.0 Kcal

2. 0.1 Kcal

3. 0.01 Kcal

4. 0.001 Kcal

Question Number : 71 Question Id : 67809417494 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The specific heat of a gas in an isothermal process is

Options :

1. infinity

2. Zero

3. Finite positive

3.

4. Finite negative

4.

Question Number : 72 Question Id : 67809417495 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Specific heat of aluminium is $0.25 \text{ cal/g/}^\circ\text{C}$. The water equivalent of an aluminium vessel of

mass one kilogram is

Options :

1. $40 \text{ cal/}^\circ\text{C}$

2. $400 \text{ cal/}^\circ\text{C}$

3. $250 \text{ cal/}^\circ\text{C}$

4. $25 \text{ cal/}^\circ\text{C}$

Question Number : 73 Question Id : 67809417496 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What should be the percentage increase in the pressure so that the volume of a gas may decrease by 5% at constant temperature?

Options :

1. 5%

2. 5.26%

3. 10%

4. 4.26%

Question Number : 74 Question Id : 67809417497 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the maximum kinetic energy of emitted photo electrons from a metal is 0.9 eV and work

function is 2.2 eV, then the wavelength of incident radiation is

Options :

1. 4000Å
2. 8000Å
3. 3000Å
4. 2000Å

Question Number : 75 Question Id : 67809417498 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the angle of incidence of a ray is greater than the critical angle at the core – cladding interface in an optical fiber, then the ray travels

Options :

1. in the core
2. in the cladding
3. in the buffer
4. along the interface

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Chemistry

Number of Questions:
Display Number Panel:
Group All Questions:

25
Yes
No

Question Number : 76 Question Id : 67809417499 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Pauli's Exclusion principle states that two electrons in same orbital have

Options :

1. same spins
2. different spins
3. opposite spins
4. vertical spins

Question Number : 77 Question Id : 67809417500 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Orbits in which electrons move according to Bohr are

Options :

1. elliptical
2. cylindrical
3. circular
4. oval

Question Number : 78 Question Id : 67809417501 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Phosphorus has an atomic number of 15. A stable phosphorus atom has an electronic configuration of

Options :

1. $1s^2 2s^2 2p^6 3p^5$
2. $1s^2 2s^2 2p^6 3s^2 3p^3$
3. $1s^2 2s^2 2p^6 3s^2 3p^1 4s^2$
4. $1s^2 1p^6 1d^7$

Question Number : 79 Question Id : 67809417502 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

NaCl is classified as having what kind of bonds in the solid phase?

Options :

1. Covalent
2. Ionic
3. Polar
4. vander Waals

Question Number : 80 Question Id : 67809417503 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Bond formed due to sharing of electrons is

Options :

1. Ionic bond
2. Metallic bond
3. Polar bond
4. Covalent bond

Question Number : 81 Question Id : 67809417504 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The normality of solution obtained by dissolving 5.3 grams of Na_2CO_3 in 1 litre solution is

Options :

1. 1N
2. 0.1N
3. 0.05N
4. 0.5N

Question Number : 82 Question Id : 67809417505 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The following solution has same molarity and normality

Options :

1. Na_2CO_3
2. NaCl
3. H_2SO_4
4. $\text{K}_2\text{Cr}_2\text{O}_7$

Question Number : 83 Question Id : 67809417506 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

5 moles of a solute is dissolved in 10 litres of solution. What is its molarity?

Options :

1. 5 M
2. 2M
3. 0.5M
4. 0.2M

Question Number : 84 Question Id : 67809417507 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Process in which acids (H^+) and bases (OH^-) react to form salts and water is called

Options :

1. Neutralization
2. Halogenation
3. Hydrogenation
4. Hydrolysis

Question Number : 85 Question Id : 67809417508 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A substance that donates a pair of electrons to form coordinate covalent bond is called

Options :

1. Lewis acid
2. Lewis base
3. Bronsted-Lowry acid
4. Bronsted-Lowry base

Question Number : 86 Question Id : 67809417509 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

One Faraday is equal to

Options :

1. 99650 C
2. 93100 C
3. 96500 C
4. 94500 C

Question Number : 87 Question Id : 67809417510 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The cell reaction of a cell is $\text{Mg(s)} + 2 \text{H}^+(\text{aq}) \rightarrow \text{Mg}^{2+}(\text{aq}) + \text{H}_2(\text{g})$. If the standard reduction potential of Zn is -2.372 V , then the emf of the cell is

Options :

1. $+2.372 \text{ V}$
2. -2.372 V
3. 0.00 V
4. -1.372 V

Question Number : 88 Question Id : 67809417511 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Galvanic cells are the cells which convert

Options :

1. Electrical energy to chemical energy
2. Chemical energy to electrical energy
3. Chemical energy to free energy
4. Potential energy to kinetic energy

Question Number : 89 Question Id : 67809417512 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Mass of substance produced at electrode is directly proportional to the quantity of electricity passed. This is known as

Options :

1. Faraday's second law
2. Faraday's first law
3. Newton's third law
4. Newton's first law

Question Number : 90 Question Id : 67809417513 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Hardness of water is expressed in terms of equivalent of

Options :

1. Na_2CO_3
2. K_2CO_3
3. MgCO_3
4. CaCO_3

Temporary hardness is caused by

Options :

1. Carbonates of calcium and magnesium
2. Chlorides of calcium and magnesium
3. Sulphates of calcium and magnesium
4. Nitrates of Calcium

Question Number : 92 Question Id : 67809417515 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The exhausted zeolite bed can be regenerated by washing with

Options :

1. NaCl
2. dil. NaOH
3. dil. HCl
4. Distilled water

Question Number : 93 Question Id : 67809417516 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Corrosion is an example of

Options :

1. Oxidation
2. Reduction
3. Electrolysis
4. Halogenation

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The composition of rust is

Options :

1. $\text{Fe}(\text{OH})_3$
2. FeCl_3
3. FeO
4. $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$

Question Number : 95 Question Id : 67809417518 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which one of the following statement is not true?

Options :

1. Natural rubber has the trans-configuration at every double bond
2. Buna-S is a copolymer of butadiene and styrene
3. Natural rubber is a 1, 4-polymer of isoprene

4. In vulcanization, the formation of sulphur bridges between different chains makes rubber harder and stronger

Question Number : 96 Question Id : 67809417519 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The monomers of Buna-S rubber are

Options :

1. Styrene and butadiene
2. Styrene and 2-propene
3. Isoprene and butadiene

4. Styrene and sulphur

Question Number : 97 Question Id : 67809417520 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The plastics which soften when heat is applied with or without pressure, but require cooling to set them to shape are called as

Options :

1. Thermosofting materials
2. Thermosetting materials
3. Thermoplastic materials
4. Thermostatting materials

Question Number : 98 Question Id : 67809417521 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which one of the following statement is not true about ideal fuel?

Options :

1. High calorific value
2. High moisture content
3. Low cost
4. Moderate ignition temperature

Question Number : 99 Question Id : 67809417522 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Environmental pollution affects

Options :

1. Humans only
2. Plants only

3. Biotic components

4. Both abiotic and biotic components

Question Number : 100 Question Id : 67809417523 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Layer of atmosphere in which ozone layer lies is

Options :

1. Troposphere

2. Stratosphere

3. Exosphere

4. Mesosphere

Computer Science and Engineering

Number of Questions: 100

Display Number Panel: Yes

Group All Questions: No

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Question Number : 101 Question Id : 67809417524 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The canonical sum of product form of the function $y(A,B) = A + B$ is

Options :

1. $AB + BB + A'A$

2. $AB + A'B + A'B'$

3. $BA + BA' + A'B'$

4. $AB + AB' + A'B$

Question Number : 102 Question Id : 67809417525 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

$(A + B)(A' * B') = ?$

Options :

1. 1
2. 0
3. AB
4. AB'

Question Number : 103 Question Id : 67809417526 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Each "1" entry in a K-map square represents:

Options :

1. A HIGH for each input truth table condition that produces a HIGH output
2. A HIGH output on the truth table for all LOW input combinations
3. A LOW output for all possible HIGH input conditions
4. A DON'T CARE condition for all possible input truth table combinations

Question Number : 104 Question Id : 67809417527 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The Register is a type of

Options :

1. Combinational circuit
2. Sequential circuit
3. CPU
4. Latches

Question Number : 105 Question Id : 67809417528 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The output sum of two decimal digits can be represented in

Options :

1. Gray Code
2. Excess-3
3. BCD
4. Hexadecimal

Question Number : 106 Question Id : 67809417529 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A basic S-R flip-flop can be constructed by cross-coupling of which basic logic gates?

Options :

1. AND or OR gates
2. XOR or XNOR gates
3. NOR or AND gates
4. NAND or NOR gates

Question Number : 107 Question Id : 67809417530 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If A and B are the inputs of a half adder, the sum is given by

Options :

1. A AND B
2. A OR B
3. A XOR B
4. A EXOR B

Question Number : 108 Question Id : 67809417531 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If one wants to design a binary counter, preferred type of flip-flop is

Options :

1. D type
2. S-R type
3. Latch
4. J-K type

Question Number : 109 Question Id : 67809417532 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Among the following layers which Layer is responsible for Token management?

Options :

1. Physical
2. Application
3. Session
4. Network

Question Number : 110 Question Id : 67809417533 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In TCP/IP, The protocol SMTP is used in which layer?

Options :

1. Application
2. Host-network
3. Transport
4. Association

Question Number : 111 Question Id : 67809417534 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Sending a message to a particular group can be named as

Options :

1. Multicasting
2. Broadcasting
3. point-point
4. Unicasting

Question Number : 112 Question Id : 67809417535 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Among the following Topologies which topology is the reliable one

Options :

1. Star
2. Ring

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3. Mesh

4. Bus

Question Number : 113 Question Id : 67809417536 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following cables work based on Light?

Options :

1. co_axial

2. copper

3. twisted pair

4. optical

Question Number : 114 Question Id : 67809417537 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Among the following devices which is used for signal strengths?

Options :

1. Repeaters

2. Hubs

3. Switches

4. bridges

Question Number : 115 Question Id : 67809417538 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which of the following networks token bus will be used ?

Options :

1. point_point

2. Broadcast

3. Unicast

4. Multicast

Question Number : 116 Question Id : 67809417539 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When an email is sent from SMTP protocol which port will receive at the destination?

Options :

1. 25

2. 31

3. 45

4. 86

Question Number : 117 Question Id : 67809417540 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The IP address 192.168.2.42 belongs to which of the following ?

Options :

1. class A

2. class B

3. class C

4. class D

Question Number : 118 Question Id : 67809417541 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When searching a website which of the following protocol is helpful?

Options :

1. SMTP
2. HTTP
3. FTP
4. TELNET

Question Number : 119 Question Id : 67809417542 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The _____ format is usually used to store data.

Options :

1. BCD
2. Decimal
3. Hecadecimal
4. Octal

Question Number : 120 Question Id : 67809417543 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The ALU makes use of _____ to store the intermediate results.

Options :

1. Accumulators
2. Registers
3. Heap
4. Stack

Question Number : 121 Question Id : 67809417544 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The addressing mode, where you directly specify the operand value is _____

Options :

1. Relative
2. Direct
3. Definite
4. Immediate

Question Number : 122 Question Id : 67809417545 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

PROM stands for _____

Options :

1. Pre-fed Read Only Memory
2. Programmable Read Only Memory
3. Pre-required Read Only Memory
4. Programmed Read Only Memory

Question Number : 123 Question Id : 67809417546 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Executing an instruction involves the following phases

Options :

1. Instruction Decoding and Instruction Storage
2. Instruction Storage and Instruction Execution
3. Instruction Fetch and Instruction Execution
4. Instruction Fetch and Instruction Processing

Question Number : 124 Question Id : 67809417547 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

An interrupt that can be temporarily ignored is

Options :

1. Vectored interrupt
2. Maskable interrupt
3. Non-Maskable interrupt
4. High priority interrupt

Question Number : 125 Question Id : 67809417548 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Both the CISC and RISC architectures have been developed to reduce the _____

Options :

1. Cost
2. Time delay
3. Turnaround time
4. Semantic gap

Question Number : 126 Question Id : 67809417549 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is Fastest memory?

Options :

1. Cache
2. RAM
3. Register
4. Secondary storage

Question Number : 127 Question Id : 67809417550 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The DMA transfers are performed by a control circuit called as

Options :

1. Device interface
2. DMA controller
3. Data controller
4. Overlooker

Question Number : 128 Question Id : 67809417551 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When we perform subtraction on -7 and 1 the answer in 2's compliment form is _____

Options :

1. 1010

2. 1110
3. 0110
4. 1000

Question Number : 129 Question Id : 67809417552 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the value of X in this C Code?

```
void main()
{
    float X=2*4/5+6;
}
```

Options :

1. Compile time error
2. 7.600000
3. 7.000000
4. 7

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Question Number : 130 Question Id : 67809417553 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not a Linear Data Structure?

Options :

1. Arrays
2. Graphs
3. Linked Lists
4. Queues

Question Number : 131 Question Id : 67809417554 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the Worst-Case Time complexity to search key in array of size N using Binary Search?

Options :

1. $O(N)$
2. $O(N^2)$

3. $O(1)$

4. $O(\log N)$

Question Number : 132 Question Id : 67809417555 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Number of Nodes in a full Binary tree with n leaves is _____.

Options :

1. $2n-1$

2. $\log n-1$

3. n^2-1

4. n^2+1

Question Number : 133 Question Id : 67809417556 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following operation in Single linked list needs less execution time?

Options :

1. Inserting a node in the beginning

2. Inserting a node in the middle

3. Inserting a node at the end

4. Inserting a node at position 2

Question Number : 134 Question Id : 67809417557 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If the given input array is sorted or nearly sorted, which of the following algorithm gives the best performance?

Options :

1. Quick sort

2. Selection sort

3. Insertion sort

4. Merge sort

Question Number : 135 Question Id : 67809417558 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of the following C Code?

```
#include<stdio.h>

void main()
{
    int x=10,y;
    y=x++;
    y=++x;
    printf("%d %d",x,y);
}
```

Options :

1. 10 12
2. 12 12
3. 12 10
4. 10 10

Question Number : 136 Question Id : 67809417559 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The type of the controlling expression of a switch statement cannot be of the type _____.

Options :

1. int
2. char
3. short
4. float

Question Number : 137 Question Id : 67809417560 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What is the output of the following C Code?

```
void main()
{
    int i;
    for(i=0;i<10;i++);
    printf("%d",i);
}
```

Options :

1. Syntax error
2. 0123456789
3. 012345678910
4. 10

Question Number : 138 Question Id : 67809417561 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is the function used to read mixed type of data from file?

Options :

1. fscanf()
2. fprintf()
3. fgets()
4. ftell()

Question Number : 139 Question Id : 67809417562 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The first micro-processor had a/an _____.

Options :

1. 1-bit data bus
2. 2-bit data bus
3. 3-bit data bus

4. 4-bit data bus

Question Number : 140 Question Id : 67809417563 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Intel's 8086 was launched in the year _____.

Options :

1. 1971
2. 1972
3. 1974
4. 1978

Question Number : 141 Question Id : 67809417564 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The registers of 8086 are _____ bits in size.

Options :

1. 8
2. 12
3. 16
4. 20

Question Number : 142 Question Id : 67809417565 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ register is used as a default counter in case of string and loop instructions.

Options :

1. AX
2. BX
3. CX
4. DX

Question Number : 143 Question Id : 67809417566 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The numbers of address and data lines of 8086 are _____ respectively.

Options :

1. 8 and 8
2. 16 and 16
3. 20 and 16
4. 16 and 20

Question Number : 144 Question Id : 67809417567 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

_____ is the most important segment that contains the actual assembly language instructions to be executed by the microprocessor.

Options :

1. Data segment
2. Code segment
3. Stack segment
4. Extra segment

Question Number : 145 Question Id : 67809417568 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The instruction, MOV AX, [2500H] is an example of

Options :

1. immediate addressing mode
2. direct addressing mode
3. indirect addressing mode
4. register addressing mode

Question Number : 146 Question Id : 67809417569 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The instruction, JMP 5000H:2000H, is an example of

Options :

1. intrasegment direct mode
2. intrasegment indirect mode
3. intersegment direct mode
4. intersegment indirect mode

Question Number : 147 Question Id : 67809417570 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

During the instruction cycle of 80386, any debug fault can be ignored if

Options :

1. VM flag is set
2. VM flag is cleared
3. RF is cleared
4. RF is set

Question Number : 148 Question Id : 67809417571 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The 16 bit flag of 8086 microprocessor is responsible to indicate _____.

Options :

1. The condition of result of ALU operation
2. The condition of memory
3. The result of addition
4. The result of subtraction

Question Number : 149 Question Id : 67809417572 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. Job queue
2. Ready queue
3. Execution queue
4. Process queue

Question Number : 150 Question Id : 67809417573 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Processes are executed in the sequence they arrive if _____ rule sequences the jobs.

Options :

1. Earliest due date
2. Slack time remaining

3. First Come First Served

4. Critical ratio

Question Number : 151 Question Id : 67809417574 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A System Program that combines the separately compiled modules of a program into a form suitable for execution is

Options :

1. Assembler
2. Linking loader
3. cross compiler
4. load and go

Question Number : 152 Question Id : 67809417575 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In which addressing mode the contents of a register specified in the instruction are first decremented, and then these contents are used as the effective address of the operands?

Options :

1. index addressing
2. indirect addressing
3. auto increment
4. auto decrement

Question Number : 153 Question Id : 67809417576 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A deadlock avoidance algorithm dynamically examines the _____ to ensure that a circular wait condition can never exist.

Options :

1. Resource allocation state
2. System storage state
3. Operating system
4. Resources

Question Number : 154 Question Id : 67809417577 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The disadvantage of invoking the detection algorithm for every request is :

Options :

1. overhead of the detection algorithm due to consumption of memory
2. excessive time consumed in the request to be allocated memory
3. considerable overhead in computation time
4. either deadlock exists or system is in a safe state

Question Number : 155 Question Id : 67809417578 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A on free space management has the advantage that it relatively easy to find one or a contiguous group of free blocks.

Options :

1. Bit table
2. Chained Free Portion
3. Indexing
4. Free Block List

Question Number : 156 Question Id : 67809417579 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The memory which allocates space for DOS and application is called _____.

Options :

1. Expanded memory
2. Cache memory
3. Virtual memory
4. Conventional memory

Question Number : 157 Question Id : 67809417580 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following statements is false?

Options :

1. You can find deleted files in recycle bin
2. You can restore any files in recycle bin if you ever need
3. You can increase free space of disk by sending files in recycle bin
4. You can right click and choose Empty Recycle Bin to clean it at once

Question Number : 158 Question Id : 67809417581 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which menu bar selection would you access to open file?

Options :

1. Option
2. Help
3. View
4. Tool

Question Number : 159 Question Id : 67809417582 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The primary purpose of an operating system is:

Options :

1. To make the most efficient use of the computer hardware
2. To allow people to use the computer
3. To keep systems programmers employed
4. To make computers easier to use

Question Number : 160 Question Id : 67809417583 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is an example of a real time operating system?

Options :

1. Lynx
2. MS DOS
3. Windows XP
4. RT Linux

Question Number : 161 Question Id : 67809417584 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A relational database consists of a collection of

Options :

1. Tables
2. Fields
3. Records
4. Keys

Question Number : 162 Question Id : 67809417585 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute.

Options :

1. Relation
2. Schema
3. Domain
4. Set

Question Number : 163 Question Id : 67809417586 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following contains a complete record of all activity that affected the contents of a database during a certain period of time?

Options :

1. query language
2. report writer
3. transaction log
4. data manipulation language

Question Number : 164 Question Id : 67809417587 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The statement in SQL which allows to change the definition of a table is

Options :

1. ALTER
2. UPDATE
3. CREATE
4. SELECT

Question Number : 165 Question Id : 67809417588 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The wildcard in a WHERE clause is useful when?

Options :

1. An exact match is necessary in a SELECT statement.
2. An exact match is not possible in a SELECT statement.
3. An exact match is necessary in a CREATE statement.
4. An exact match is not possible in a CREATE statement.

Question Number : 166 Question Id : 67809417589 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

When three or more AND and OR conditions are combined, it is easier to use the SQL keyword(s):

Options :

1. LIKE Only
2. IN only
3. NOT IN only

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4. Both IN and NOT IN

Question Number : 167 Question Id : 67809417590 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Given the basic ER and relational models, which of the following is INCORRECT?

Options :

1. An attribute of an entity can have more than one value
2. An attribute of an entity can be composite
3. In a row of a relational table, an attribute can have more than one value
4. In a row of a relational table, an attribute can have exactly one value or a NULL value

Question Number : 168 Question Id : 67809417591 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is TRUE?

Options :

1. Every relation in 3NF is also in BCNF
2. Every relation in BCNF is also in 3NF
3. A relation R is in 3NF if every non-prime attribute of R is fully functionally dependent on every key of R
4. No relation can be in both BCNF and 3NF

Question Number : 169 Question Id : 67809417592 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

A selection of the form giving all the records not satisfying simple individual conditions is _____.

Options :

1. Conjunctive selection
2. Disjunctive selection
3. Negation
4. Conjunctive selection by intersection of identifiers

Question Number : 170 Question Id : 67809417593 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The lowest level operator to access data in query processing is _____.

Options :

1. File scan
2. File manipulation
3. File handling
4. File organization

Question Number : 171 Question Id : 67809417594 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The process of making a function to exhibit different behaviors in different instances is called _____.

Options :

1. function overloading
2. operator overloading
3. inheritance
4. polymorphism

Question Number : 172 Question Id : 67809417595 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The _____ principle helps the programmer to build secure programs.

Options :

1. operator overloading
2. encapsulation
3. data hiding
4. polymorphism

Question Number : 173 Question Id : 67809417596 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In a class, encapsulating an object of another class is called

Options :

1. Composition
2. Inheritance
3. Encapsulation
4. Polymorphism

Question Number : 174 Question Id : 67809417597 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If you want to write multiple functions in a class with same name, then what C++ feature will you use?

Options :

1. Function Overriding
2. Function overloading
3. Encapsulation
4. Inheritance

Question Number : 175 Question Id : 67809417598 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

In C++, Class object created statically and dynamically are stored in the following memories respectively.

Options :

1. Stack, Heap
2. heap, Heap
3. Heap, Stack
4. Stack, Stack

Question Number : 176 Question Id : 67809417599 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following statements is correct in C++?

Options :

1. C ++ allows any operator to be overloaded.

2. Some of the existing operators cannot be overloaded.

3.

3. Operator precedence cannot be changed

4. reduces the compilation time

Question Number : 177 Question Id : 67809417600 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following operators cannot be overloaded?

Options :

1. >>

2. ?:

3. .

4. ?

Question Number : 178 Question Id : 67809417601 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The fields in a structure of a C program are by default

Options :

1. Protected

2. Public

3. Private

4. Void

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Question Number : 179 Question Id : 67809417602 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Blanks, tabs, newlines, form feeds and comments are collectively called_____.

Options :

1. Blank Fields

2. White Space

3. Null Values

4. Literals

Question Number : 180 Question Id : 67809417603 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Use of existing assets in some form within software product development process is termed as

Options :

1. Reusability

2. Usability

3. Robust
4. Reboot

Question Number : 181 Question Id : 67809417604 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Size of float and double in Java is

Options :

1. 32 and 64
2. 64 and 64
3. 32 and 32
4. 64 and 32

Question Number : 182 Question Id : 67809417605 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

The prototype of the default constructor is

Options :

1. Set ()
2. Set (void)
3. Public Set ()
4. Public Set (void)

Question Number : 183 Question Id : 67809417606 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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What is the output of the following program?

```
class Output
{
    public static void main(String args[])
    {
        boolean a = true;
        boolean b = false;
        boolean c = a ^ b;
        System.out.println(!c);
    }
}
```

Options :

1. 0
2. True
3. False
4. 1

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Question Number : 184 Question Id : 67809417607 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Given the following code fragment, What is the value of A[3]?

```
int A[];  
int i = 0;  
A = new int A[4];  
while (i < 4)  
{  
    A[i] = 10;  
    i = i + 1;  
}
```

Options :

1. 0
2. 3
3. 10
4. 11

Question Number : 185 Question Id : 67809417608 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which class cannot be subclassed (or extended) in java?

Options :

1. Abstract class
2. Parent class
3. Final class
4. Sub Class

Question Number : 186 Question Id : 67809417609 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Thread class is available in

Options :

1. java.io package
2. java.lang package

3. java.awt package

4. java.util package

Question Number : 187 Question Id : 67809417610 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the operator is used to generate an instance of an exception than can be thrown by using throw?

Options :

1. new
2. malloc
3. alloc
4. thrown

Question Number : 188 Question Id : 67809417611 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

String is the predefined

Options :

1. Method
2. Class
3. Variable
4. Object

Question Number : 189 Question Id : 67809417612 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these methods can be used to output a string in an applet?

Options :

1. display()
2. print()
3. drawString()
4. transient()

Question Number : 190 Question Id : 67809417613 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of these keywords is used by a class to use an interface defined previously?

Options :

1. import
2. export
3. implements
4. variables passing

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Question Number : 191 Question Id : 67809417614 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following statement is true?

Options :

1. Attribute names must be in uppercase
2. Attribute values must be quoted
3. Attribute minimization is mandatory
4. Attribute value must not be quoted

Question Number : 192 Question Id : 67809417615 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What will be the output of the following PHP code?

```
<?php  
$color = "maroon";  
$var = $color[2];  
echo "$var";  
?>
```

Options :

1. A
2. Error
3. \$Var
4. r

Question Number : 193 Question Id : 67809417616 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct HTML tag for the largest heading is

Options :

1. <head>
2. <h6>
3. <heading>

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4. <h1>

Question Number : 194 Question Id : 67809417617 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which one of the following functions will convert a string to all uppercase letters?

Options :

1. strtoupper()
2. uppercase()
3. str_uppercase()
4. struppercase()

Question Number : 195 Question Id : 67809417618 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which attribute is used to extend the lifetime of a cookie?

Options :

1. higher-age
2. increase-age
3. max-age
4. lifetime

Question Number : 196 Question Id : 67809417619 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

If you are using the DataSet and you have to display the data in sorted order what will you do?

Options :

1. Use Sort method of DataTable
2. Use Sort method of DataSet
3. Use DataView object with each sort
4. Use datapaging and sort the data

Question Number : 197 Question Id : 67809417620 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

What are the three primary kinds of parameters?

Options :

1. Input, Integer, String
2. Integer, String, DateTime
3. int, varchar, nvarchar
4. Input, Output, InputOutput

Question Number : 198 Question Id : 67809417621 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following is not the method of DataAdapter?

Options :

1. Fill
2. Schema
3. ReadData
4. Update

Question Number : 199 Question Id : 67809417622 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Which of the following method of the command object is best suited when you have aggregate functions in a SELECT statement?

Options :

1. ExecuteScalar
2. ExecuteReader
3. ExecuteNonQuery
4. Execute

Question Number : 200 Question Id : 67809417623 Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

ADO.NET provides the ability to create and process in-memory databases called:

Options :

1. Views
2. Relations
3. Tables
4. Datasets

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