

Question Paper Preview

Question Paper Name :	Electronics and Instrumentation Engineering 14th Sep 2020 S2
Subject Name :	Electronics and Instrumentation Engineering
Duration :	180
Total Marks :	200
Display Marks:	No
Share Answer Key With Delivery Engine :	Yes
Actual Answer Key :	Yes
Is this Group for Examiner? :	No

Mathematics

Section Number :	1
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

**Question Number : 1 Question Id : 61097514229 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

If $A = \begin{bmatrix} 3 & 1 \\ 1 & 4 \end{bmatrix}$ and $A^2 - kA - 4I_2 = 0$ then $k =$

Options :

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

Question Number : 2 Question Id : 61097514230 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $A = \begin{bmatrix} 0 & 2 & 1 \\ -2 & 0 & -2 \\ -1 & x & 0 \end{bmatrix}$ is a skew-symmetric matrix , then x is

Options :

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

Question Number : 3 Question Id : 61097514231 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $a+b+c=0$, one root of $\begin{vmatrix} a-x & c & b \\ c & b-x & a \\ b & a & c-x \end{vmatrix} = 0$ is

Options :

1. $x=0$

2. $x=1$

3. $x=2$

4. $x=a^2+b^2+c^2$

Question Number : 4 Question Id : 61097514232 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The co-factors of the elements 2,-5 in the matrix $\begin{pmatrix} -1 & 0 & 5 \\ 1 & 2 & -2 \\ -4 & -5 & 3 \end{pmatrix}$ is

Options :

1. 16, 3

2. 17, -3

3. 17, 3

4. -17, -3

Question Number : 5 Question Id : 61097514233 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The solution of a system of linear equations $2x-y+3z=9$, $x+y+z=6$, $x-y+z=2$ is

Options :

1. $x = -1, y = -2, z = -3$

2. $x = -1, y = -2, z = 3$

3. $x = -1, y = 2, z = -3$

4. $x = 1, y = 2, z = 3$

Question Number : 6 Question Id : 61097514234 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $\frac{2x+4}{(x-1)^3} = \frac{S_1}{(x-1)} + \frac{S_2}{(x-1)^2} + \frac{S_3}{(x-1)^3}$ Then $\sum_{j=1}^3 S_j$ is equal to

Options :

1. S_2

2. $2S_2$

3. $4S_2$

4. $4S_1$

Question Number : 7 Question Id : 61097514235 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $\frac{3x^3 - 2x^2 - 1}{x^4 + x^2 + 1} = \frac{Ax + B}{x^2 + x + 1} + \frac{Cx + D}{x^2 + kx + 1}$ then k =

Options :

1. 0

2. 1

3. -1

4. 2

Question Number : 8 Question Id : 61097514236 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $\sin 780^\circ \sin 480^\circ - \cos 120^\circ \sin 330^\circ = k$ then k is

Options :

1. 0

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

Question Number : 9 Question Id : 61097514237 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If A,B,C,D are the angles of cyclic quadrilateral taken in order, then

$$\cos A + \cos B + \cos C + \cos D =$$

Options :

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

Question Number : 10 Question Id : 61097514238 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\text{If } \tan \theta = \frac{4}{3} \text{ then } \sqrt{\frac{1 - \sin \theta}{1 + \sin \theta}} =$$

Options :

- 1.

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

2. $\frac{2}{3}$

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

4. $\frac{-2}{3}$

Question Number : 11 Question Id : 61097514239 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The period of the function $f(x) = |\sin x|$ is

Options :

1. 2π

2. π

3. 3π

4. 4π

Question Number : 12 Question Id : 61097514240 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The value of $\tan 1^\circ \tan 2^\circ \tan 3^\circ \dots \tan 89^\circ$ is

Options :

1. 1

2. 0

3. -1

4. ∞

Question Number : 13 Question Id : 61097514241 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $f(x) = \cos^2 x + \sec^2 x$ then its value always is

Options :

1. $f(x) < 1$

2. $f(x) = 1$

3. $2 > f(x) < 1$

4. $f(x) \geq 2$

Question Number : 14 Question Id : 61097514242 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If n is odd, then $\left(\frac{\cos x + \cos y}{\sin x - \sin y}\right)^n + \left(\frac{\sin x + \sin y}{\cos x - \cos y}\right)^n =$

Options :

1. -1

2. 1

3. 0

4. 2

Question Number : 15 Question Id : 61097514243 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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

Options :

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

2. $\frac{\pi}{2}$

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

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

Question Number : 16 Question Id : 61097514244 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The trigonometric equation $\sin^{-1}x=2\sin^{-1} a$, has a solution for

Options :

1. $|a| < \frac{1}{2}$

2. $|a| \geq \frac{1}{\sqrt{2}}$

3. $\frac{1}{2} < |a| < \frac{1}{\sqrt{2}}$

4. $|a| \leq \frac{1}{\sqrt{2}}$

Question Number : 17 Question Id : 61097514245 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The solution set of the system of equations $x + y = \frac{2\pi}{3}$ and $\cos x + \cos y = \frac{3}{2}$ is

Options :

1.

ϕ

2. $\left\{ n\pi + \frac{2\pi}{3}, n = 1, 2, 3, \dots \right\}$

3. $\left\{ n\pi - \frac{2\pi}{3}, n = 1, 2, 3, \dots \right\}$

4. 0

**Question Number : 18 Question Id : 61097514246 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

if $z = \frac{7-i}{3-4i}$ then z^{14} is

Options :

1. 2^7

2. $2^7 i$

3. $-2^7 i$

4. -2^7

Question Number : 19 Question Id : 61097514247 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

$i^2+i^4+i^6+\dots+(2n+1)$ terms is

Options :

1. 0

2. -1

3. $-i$

4. i

Question Number : 20 Question Id : 61097514248 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The equation of the polar of $(-2,3)$ with respect to $x^2+y^2-4x-6y+5=0$ is

Options :

1. $x=y$

2. $x+y=0$

3. $x=0$

4. $y=0$

Question Number : 21 Question Id : 61097514249 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A parabolic arc has a height of 12m and a span of 20m. The height of the arc, 5m away on either side of the centre is

Options :

1. 2m
2. 3m
3. 6m
4. 9m

Question Number : 22 Question Id : 61097514250 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The eccentricity of the ellipse whose latus-rectum is one third of its minor axis is

Options :

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

4. $2\sqrt{\frac{2}{3}}$

Question Number : 23 Question Id : 61097514251 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A conic with eccentricity $\frac{3}{2}$ is

Options :

1. Parabola
2. Ellipse
3. hyperbola
4. Circle

Question Number : 24 Question Id : 61097514252 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The focus of the parabola $(y-1)^2=8(x-3)$ is

Options :

1. (4,2)
2. (3,5)

3. (5,1)

4. (2,1)

Question Number : 25 Question Id : 61097514253 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The tangents drawn from the point P(-2,19) to the parabola $y^2=8x$ are perpendicular to each other. Then the point P lies on the parabola at

Options :

1. Tangent at the vertex

2. directrix

3. latus-rectum

4. diameter through the focus

Question Number : 26 Question Id : 61097514254 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\lim_{n \rightarrow \infty} \left(\frac{n}{n+1} \right)^{2n} \text{ is}$$

Options :

1. 0

2. e

3. e^2

4. $1/e^2$

**Question Number : 27 Question Id : 61097514255 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

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

Options :

1. $\frac{x-y}{1+\log xy}$

2. $\frac{x-y}{x(1+\log xy)}$

3. $\frac{x+y}{x(1+\log xy)}$

4. $\frac{x+y}{x \log y}$

**Question Number : 28 Question Id : 61097514256 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

If $f(x) = \frac{x}{1+|x|}$, $x \in R$ then $f'(0) =$

Options :

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

Question Number : 29 Question Id : 61097514257 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. $x \cdot x^x (1 + 2 \log x)$
2. $(1 + 2 \log x) x^{(x^2+1)}$
3. $(1 + 2 \log x) x^{x^2}$
4. $x \cdot x^x (1 - 2 \log x)$

Question Number : 30 Question Id : 61097514258 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

If $x=e^{3t}\cos 3t$ then $\frac{d^2x}{dt^2}$ at $t=\frac{\pi}{2}$ is

Options :

1. $6e^\pi$
2. $12e^\pi$
3. $-12e^\pi$
4. $-6e^\pi$

Question Number : 31 Question Id : 61097514259 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The maximum area of a rectangle with perimeter 176cm is

Options :

1. 1936cm^2
2. 1854cm^2
3. 2110cm^2
4. 1735cm^2

Question Number : 32 Question Id : 61097514260 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Two positive numbers whose sum is 64 and sum of whose cubes is minimum are given by

Options :

1. 32,32
2. 48,16
3. 40,24
4. 32, 24

Question Number : 33 Question Id : 61097514261 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If u be a homogeneous function of degree n , then $x \frac{\partial^2 u}{\partial x^2} + y \frac{\partial^2 u}{\partial y^2} =$

Options :

1. nu
2. $n \frac{\partial u}{\partial x}$
3. $(n-1) \frac{\partial u}{\partial x}$

$$4. \quad n(n-1) \frac{\partial u}{\partial x}$$

Question Number : 34 Question Id : 61097514262 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $u=f(x-y, y-z, z-x)$ then $\frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} + \frac{\partial u}{\partial z}$ is

Options :

1. 3

2. -3

3. u

4. 0

Question Number : 35 Question Id : 61097514263 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A stone is dropped into a quite lake and waves move in a circle at a speed of 6cm/sec. At the instant when the radius of the circular wave is 16cm , the enclosed area increases at the rate

Options :

1. $100 \pi \text{ cm}^2 / \text{sec}$

2. $32 \pi \text{ cm}^2 / \text{sec}$

3. $192 \pi \text{ cm} / \text{sec}$

4. $192 \pi \text{ cm}^2 / \text{sec}$

Question Number : 36 Question Id : 61097514264 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\int \frac{dx}{1 + \sin x + \cos x} =$$

Options :

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

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

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

4. $\log \left(1 + \sec \left(\frac{x}{2} \right) \right) + c$

Question Number : 37 Question Id : 61097514265 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\int_0^1 \frac{\log(1+x)}{x} dx \text{ is}$$

Options :

1. 0

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

3. $\frac{\pi^2}{4}$

4. $\frac{\pi^2}{12}$

Question Number : 38 Question Id : 61097514266 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. $2\log(e^x+1)+c$

2. $\log(e^{2x}-1)+c$

3. $2\log(e^x+1)-x+c$

4. $\log(e^{2x}+1)+c$

Question Number : 39 Question Id : 61097514267 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The mean value of the ordinate of a semi circle of radius a taken along the diameter is

Options :

1. $\frac{a\pi}{2}$
2. $2a\pi$
3. $\frac{a\pi}{4}$
4. $24a\pi$

Question Number : 40 Question Id : 61097514268 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The area enclosed by the curve $|x| + |y| = 1$ is

Options :

1. 2
2. π
3. π^2

4. 1

Question Number : 41 Question Id : 61097514269 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\int_a^b f(x) dx \text{ represents}$$

Options :

1. The area bounded by the curve and the x-axis
2. The area bounded by the curve and the ordinates $x=a, x=b$
3. The area bounded by the curve, the x-axis and the ordinates $x=a, x=b$
4. The area not bounded by the curve

Question Number : 42 Question Id : 61097514270 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

$$\int_{-\frac{\pi}{2}}^{\frac{\pi}{2}} \sin |x| dx \text{ is}$$

Options :

1. 0

2. 2

3. $\frac{1}{2}$

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

Question Number : 43 Question Id : 61097514271 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Mean value of $\frac{1}{1+x^2}$ on $[-1,1]$ is

Options :

1. 0

2. $\frac{\pi}{2}$

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

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

Question Number : 44 Question Id : 61097514272 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The order and degree of the differential equation $y = x \frac{dy}{dx} + \frac{3}{\frac{dy}{dx}}$ is

Options :

1. 1,2
2. 2,1
3. 1,1
4. 2,2

Question Number : 45 Question Id : 61097514273 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The differential equation $y \frac{dy}{dx} + x = a$ represents

Options :

1. a set of circles whose centers are on the x-axis
2. a set of circles whose centers are on the y-axis
3. a set of parabolas
4. a set of ellipses

Question Number : 46 Question Id : 61097514274 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

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

Options :

1. $\sin^{-1}x + \sin^{-1}y = c$
2. $\sin^{-1}x - \sin^{-1}y = c$
3. $\sinh^{-1}x + \sinh^{-1}y = c$
4. $\tan^{-1}x + \sin^{-1}y = c$

Question Number : 47 Question Id : 61097514275 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Particular solution of $(D^2 - D - 2)y = \sin 2x$ is

Options :

1. $\frac{\cos 2x - 3 \sin 2x}{20}$
2. $\frac{\cos x}{2}$
- 3.

$$\frac{\sin x}{2}$$

4. $\frac{x \sin 2x}{8}$

Question Number : 48 Question Id : 61097514276 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The integrating factor of $y(xy+2x^2y^2)dx+x(xy-x^2y^2) = 0$ is

Options :

1. $\frac{1}{3x^3y^3}$

2. $\frac{1}{x^3}$

3. $\frac{1}{y^3}$

4. $\frac{3}{x^3y^3}$

Question Number : 49 Question Id : 61097514277 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If $y=Ae^x+Be^{2x}$, where A and B are arbitrary constants, then the differential equation is

Options :

1. $y_2 + 3y_1 + 2y = 0$

2. $y_2 - 3y_1 - 2y = 0$

3. $y_2 + 3y_1 - 2y = 0$

4. $y_2 - 3y_1 + 2y = 0$

Question Number : 50 Question Id : 61097514278 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The length of the sub normal at any point on $y^2=4ax$ is

Options :

1. $\frac{a}{2}$

2. $\frac{a}{3}$

3. a

4. $2a$

Physics

Section Number :	2
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

Question Number : 51 Question Id : 61097514279 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The dimensional formula for magnetic flux is

Options :

1. $[ML^2T^{-2}A^{-1}]$
2. $[ML^3T^{-2}A^{-2}]$
3. $[M^0L^{-2}T^{-2}A^{-2}]$
4. $[ML^2T^{-1}A^2]$

Question Number : 52 Question Id : 61097514280 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The unit for angular frequency is

Options :

1. Hertz

2. Newton
3. Degrees (or) radians per second
4. Steradian

Question Number : 53 Question Id : 61097514281 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The sum of two vectors A and B is at right angles to their difference. Then

Options :

1. $A = B$
2. $A = 2B$
3. $B = 2A$
4. A and B have the same direction

Question Number : 54 Question Id : 61097514282 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The resultant of two forces, one double the other in magnitude, is perpendicular to the smaller of the two forces. The angle between the two forces is

Options :

1. 120°
2. 60°

3. 90^0

4. 150^0

Question Number : 55 Question Id : 61097514283 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A body starts from rest travels a distance x in first two seconds and a distance y in next two seconds. The relation between x and y is

Options :

1. $y = 4x$

2. $y = x$

3. $y = 3x$

4. $y = 2x$

Question Number : 56 Question Id : 61097514284 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Two bodies are projected from the ground with the same speed. If the angles of their projection from the ground are 45^0 and 15^0 respectively, the ratio of their ranges is

Options :

1. $1 : 2$

2. $2 : 1$

3. $\sqrt{3} : 2$

4. $1 : \sqrt{2}$

Question Number : 57 Question Id : 61097514285 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Two bodies of different masses are dropped from heights of 2 m and 8 m respectively, then the ratio of the time taken by them is _____.

Options :

1. $1 : 4$

2. $1 : 1$

3. $1 : 2$

4. $1 : 3$

Question Number : 58 Question Id : 61097514286 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The angle of projection of a projectile for which the horizontal range and maximum height are equal is

Options :

1. $\sin^{-1}(4)$

2. $\tan^{-1}(4)$

3. $\cos^{-1}(4)$

4. $\tan^{-1}(8)$

Question Number : 59 Question Id : 61097514287 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If μ_k is the coefficient of kinetic friction, μ_r is the coefficient of rolling friction and μ_s is the coefficient of static friction, then

Options :

1. $\mu_s > \mu_k > \mu_r$

2. $\mu_s < \mu_k < \mu_r$

3. $\mu_s < \mu_r < \mu_k$

4. $\mu_s > \mu_r > \mu_k$

Question Number : 60 Question Id : 61097514288 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A boy of mass 40 kg is climbing a vertical pole at a constant speed. If the coefficient of friction between his palms and the pole is 0.8 and $g = 10 \text{ m/s}^2$, the horizontal force that he is applying on the pole is

Options :

1. 300 N
2. 400 N
3. 500 N
4. 600 N

Question Number : 61 Question Id : 61097514289 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

How many 2.5 kg bricks can a man carry up a 3.6 meter staircase in one hour if he works at an average rate of 9.8 watt?

Options :

1. 800
2. 200
3. 600
4. 400

Question Number : 62 Question Id : 61097514290 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A spring of force constant 800 N m^{-1} has an extension of 5 cm. The work done in extending it from 5 cm to 15 cm is

Options :

1. 16 J
2. 8 J
3. 32 J
4. 24 J

Question Number : 63 Question Id : 61097514291 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Among the following sources of energy, for which source, sun is not a chief source of energy

Options :

1. Hydroelectric power plant
2. Ocean thermal energy
3. Tidal energy
4. Biomass

Question Number : 64 Question Id : 61097514292 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A particle executes simple harmonic motion along a straight line so that its period is 12 seconds .
The time it takes in traversing a distance equal to half of its amplitude from its equilibrium position is

Options :

1. 6 seconds
2. 4 seconds
3. 2 seconds
4. 1 second

Question Number : 65 Question Id : 61097514293 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A particle executes simple harmonic motion with a frequency f . The frequency with which the potential energy oscillates is

Options :

1. f
2. $f/2$
3. $2f$
4. zero

Question Number : 66 Question Id : 61097514294 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A tuning fork A of frequency 512 Hz produces 4 beats per second when sounded with a tuning fork B. Due to filing of the prongs of the tuning fork B, the number of the beats per second becomes 6. The actual frequency of B is

Options :

1. 516 Hz
2. 508 Hz
3. 512 Hz
4. 500 Hz

Question Number : 67 Question Id : 61097514295 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A car sounding a horn of frequency 1000 Hz passes an observer. The ratio of frequencies of the horn noted by the observer before and after passing of car is 11: 9. If the speed of sound is v , then the speed of the car is

Options :

1. $v/10$
2. $v/20$
3. $v/2$

4. $v/5$

Question Number : 68 Question Id : 61097514296 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The reverberation time is

Options :

1. Directly proportional to sound absorption
2. Inversely proportional to volume
3. Inversely proportional to sound absorption
4. Directly proportional to pressure

Question Number : 69 Question Id : 61097514297 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The pressure P_1 and density d_1 of a diatomic gas ($\gamma = 7/5$) change to P_2 and d_2 during an

adiabatic operation. If $\frac{d_2}{d_1} = 32$, then $\frac{P_2}{P_1}$ is

Options :

1. 125
2. 128
3. 32

4. 256

Question Number : 70 Question Id : 61097514298 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The first law of thermodynamics is concerned with conservation of

Options :

1. No. of molecules
2. No. of moles
3. Energy
4. Temperature

Question Number : 71 Question Id : 61097514299 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

When ice cube melts into water,

Options :

1. Entropy decreases and internal energy decreases
2. Entropy decreases and internal energy increases
3. Entropy increases and internal energy increases
4. Entropy increases and internal energy decreases

Question Number : 72 Question Id : 61097514300 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For nitrogen, $C_P - C_V = x$ and for argon, $C_P - C_V = y$. The relation between x and y is

Options :

1. $x = y$
2. $x = 7y$
3. $y = 7x$
4. $x = y/2$

Question Number : 73 Question Id : 61097514301 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A Carnot's engine extracts 1.5×10^3 kilocalories of heat from a reservoir at 627°C and exhausts it to a sink maintained at 27°C . The work performed by the engine is

Options :

1. 4.2 J
2. 4.2×10^2 J
3. 4.2×10^{-6} J
4. 4.2×10^6 J

Question Number : 74 Question Id : 61097514302 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

At critical angle, the angle of refraction is

Options :

1. 45°
2. 90°
3. 180°
4. 60°

Question Number : 75 Question Id : 61097514303 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Superconductivity is due to the formation of

Options :

1. Domain walls
2. Electron-hole pairs
3. Hysteresis
4. Cooper pairs

Chemistry

Section Number :	3
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

Question Number : 76 Question Id : 61097514304 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The atomic weight and atomic number of an element are A and Z respectively.

The number of neutrons in the atom of that element is.

Options :

1. A
2. Z
3. $Z + A$
4. $A - Z$

Question Number : 77 Question Id : 61097514305 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The two electrons present in an orbital are distinguished by :

Options :

1. Principal Quantum number
2. Spin Quantum number
3. Magnetic Quantum number
4. Azimutal Quantum number

Question Number : 78 Question Id : 61097514306 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The order of increasing energies of the orbitals follows:

Options :

1. 3s, 3p, 3d, 4s, 4p
2. 3s, 3p, 4s, 4p, 3d
3. 3s, 3p, 4s, 3d, 4p
4. 3s, 3p, 3d, 4p, 4s

Question Number : 79 Question Id : 61097514307 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Ionic bond is formed by

Options :

1. Sharing of electrons
2. Donating of electron
3. Transfer of Electrons
4. Donating of electron pair

Question Number : 80 Question Id : 61097514308 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The total number of electrons that take part in forming bonds in N_2 is

Options :

1. 2
2. 4
3. 10
4. 6

Question Number : 81 Question Id : 61097514309 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Sum of mole fractions of the two components of a solution is always

Options :

1. more than one

2. less than one
3. exactly one
4. not fixed

Question Number : 82 Question Id : 61097514310 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A 10N Solution stands for

Options :

1. Normal solution
2. Decanormal solution
3. Decinormal solution
4. Seminormal solution

Question Number : 83 Question Id : 61097514311 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The molarity of pure water is

Options :

1. 55.6
2. 50

3. 100

4. 18

Question Number : 84 Question Id : 61097514312 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

According to Bronsted –Lowry theory which one of the following is considered as an acid?

Options :

1. OH^-

2. HSO_4^-

3. H_3O^+

4. Cl^-

Question Number : 85 Question Id : 61097514313 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The pH of a solution containing 10^{-6} HCl is

Options :

1. 4

2. 6

3. 8

4. 10

Question Number : 86 Question Id : 61097514314 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

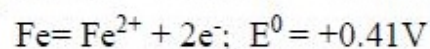
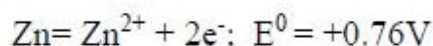
Calculate the quantity of electricity that will be required for liberating 710g of chlorine gas by the electrolysis of a concentrated solution of NaCl.

Options :

1. 10 faradys
2. 20 faradays
3. 5 faradays
4. 18 faradays

Question Number : 87 Question Id : 61097514315 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The standard reduction potentials (E^0) for the half reactions are as given below



The EMF for the cell reaction $\text{Fe}^{2+} + \text{Zn} \rightarrow \text{Zn}^{2+} + \text{Fe}$ is

Options :

1. -0.35 V

2. +0.35 V

3. +1.17 V

4. -1.17 V

Question Number : 88 Question Id : 61097514316 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The best electronic conductor is

Options :

1. Copper

2. Aluminium

3. Zinc

4. Silver

Question Number : 89 Question Id : 61097514317 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The electric charge for electrode deposition of one gram equivalent of a substance is

Options :

1. Charge on one mole of electrons

2. One ampere per second

3. 96500 coulombs per second

4. One ampere for one hour

Question Number : 90 Question Id : 61097514318 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Hardness of water is expressed in terms of ----- equivalents

Options :

1. MgCO_3

2. CaCO_3

3. Na_2CO_3

4. K_2CO_3

Question Number : 91 Question Id : 61097514319 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following is a powerful disinfectant?

Options :

1. O_2

2. Cl_2

3. CaOCl_2

4. N₂

Question Number : 92 Question Id : 61097514320 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The process of killing pathogenic bacteria in water is called

Options :

1. Softening
2. Osmosis
3. Sterilization
4. Reverse osmosis

Question Number : 93 Question Id : 61097514321 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The metal oxide film that can easily undergo corrosion is

Options :

1. Stable
2. Porous
3. Volatile
4. Unstable

Question Number : 94 Question Id : 61097514322 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In galvanised articles, which metal protects the base metal?

Options :

1. Fe
2. Cu
3. Zn
4. Pb

Question Number : 95 Question Id : 61097514323 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is thermosetting plastic?

Options :

1. PVC
2. Bakelite
3. Polystyrene
4. Teflon

**Question Number : 96 Question Id : 61097514324 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

Natural rubber is a polymer of:

Options :

1. Isoprene
2. Ethylene
3. Vinyl chloride
4. Styrene

**Question Number : 97 Question Id : 61097514325 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option
Orientation : Vertical**

Ebonite is a :

Options :

1. PVC
2. Synthetic rubber
3. Highly vulcanised rubber
4. Polystyrene

**Question Number : 98 Question Id : 61097514326 Question Type : MCQ Display Question
Number : Yes Is Question Mandatory : No Single Line Question Option : No Option**

Orientation : Vertical

The coal having the highest ranking is

Options :

1. Anthracite
2. Peat
3. Lignite
4. Bituminous

Question Number : 99 Question Id : 61097514327 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following causes Minamata disease

Options :

1. Argan
2. Sulphur
3. Mercury
4. Nitrogen

Question Number : 100 Question Id : 61097514328 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following is not a green house gas?

Options :

1. Carbon dioxide
2. Methane gas
3. Water vapour
4. Nitrogen gas

Electronics and Instrumentation Engineering

Section Number :	4
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

Question Number : 101 Question Id : 61097514329 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is not equivalent to watts?

Options :

1. amperes x volts
2. (amperes)² x ohm

3. amperes/volt
4. joules per second

Question Number : 102 Question Id : 61097514330 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The condition for the validity of Ohm's law is that the _____

Options :

1. temperature should remain constant
2. current should be proportional to voltage
3. resistance must be wire wound type
4. current should be constant

Question Number : 103 Question Id : 61097514331 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

While determining R_{TH} of a circuit _____

Options :

1. voltage and current sources should be left as they are
2. all sources should be replaced by their source resistances

3. all independent current and voltage sources are short circuited
4. all independent current and voltage sources are open circuited

Question Number : 104 Question Id : 61097514332 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The armature of a dc machine is laminated _____

Options :

1. to reduce the hysteresis loss
2. to reduce eddy current loss
3. to reduce the mass
4. to reduce the inductance

Question Number : 105 Question Id : 61097514333 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A 250 V dc generator is run at rated speed with no excitation. The open circuit voltage will be _____

Options :

1. zero
2. very small, about 2 or 3 V

3. about 100 V

4. 250 V

Question Number : 106 Question Id : 61097514334 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If the applied voltage to a dc machine is 230 V, then the back emf for maximum power developed is _____

Options :

1. 115 V

2. 200 V

3. 230 V

4. 460 V

Question Number : 107 Question Id : 61097514335 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A photodiode works on the principle of _____

Options :

1. Photovoltaic effect

2. Photoconductive effect

3. Photoelectric effect

4. Photothermal effect

Question Number : 108 Question Id : 61097514336 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following devices utilizes photoconductive effect?

Options :

1. Solar Cell

2. LED

3. LCD

4. Wind farm

Question Number : 109 Question Id : 61097514337 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a photo multiplier _____

Options :

1. Gain is independent of stray magnetic fields

2. high frequency response is improved by increasing the no. of dynodes

3. Secondary emission is used for amplification of low level photo current

4. The electrons are directed to the anode by applying a strong magnetic field

Question Number : 110 Question Id : 61097514338 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In induction heating, which of the following is of high value?

Options :

1. Frequency
2. Current
3. Voltage
4. Power factor

Question Number : 111 Question Id : 61097514339 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The main drawback of _____ welding is high initial as well as maintenance cost

Options :

1. resistance
2. spot

3. seam

4. arc

Question Number : 112 Question Id : 61097514340 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The dominant poles of a servo system are located at $s = (-2 \pm j2)$. The damping ratio of the system is _____

Options :

1. 1

2. 0.8

3. 0.707

4. 0.6

Question Number : 113 Question Id : 61097514341 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Mason's rule is applied to _____

Options :

1. Translational system

2. rotational system

3. hydraulic system

4. signal flow graph

Question Number : 114 Question Id : 61097514342 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A system has the transfer function: $G(s) = \frac{100(s+5)(s+50)}{s^4(s+10)(s^2+3s+10)}$. The type and order of the system respectively _____

Options :

1. 4 and 9

2. 4 and 7

3. 5 and 7

4. 7 and 5

Question Number : 115 Question Id : 61097514343 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The loop transfer function of a system is given by, $G(s)H(s) = \frac{K(s+10)^2(s+100)}{s(s+25)}$, the

number of loci terminating at infinity is _____

Options :

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

Question Number : 116 Question Id : 61097514344 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which one of the following has the ability to act as an open circuit for dc and a short circuit for ac of high frequency?

Options :

1. An inductor
2. A capacitor
3. A resistor
4. A transistor

Question Number : 117 Question Id : 61097514345 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

With an increase in temperature, the Fermi level in an intrinsic semiconductor

Options :

1. Moves closer to the conduction band edge
2. Moves closer to the valence band edge
3. Moves into the conduction band
4. Remains at the center of the forbidden gap

Question Number : 118 Question Id : 61097514346 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Avalanche breakdown is primarily dependent on the phenomenon of _____

Options :

1. Collision
2. Doping
3. Ionization
4. Recombination

Question Number : 119 Question Id : 61097514347 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Zener diode is used as the main component in dc power supply for

Options :

1. Rectification
2. Voltage regulation
3. Filter action
4. Voltage regulation and rectification

Question Number : 120 Question Id : 61097514348 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The primary function of a filter is to

Options :

1. Minimize ac input variations
2. Suppress odd harmonics in the rectifier output
3. Stabilize dc level of the output voltage
4. Remove ripples from the rectified output

Question Number : 121 Question Id : 61097514349 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In saturation region of an N-P-N transistor _____

Options :

1. V_{CB} is negative and V_{BE} is positive
2. V_{CB} is positive and V_{BE} is negative
3. V_{CB} is positive and V_{BE} is positive
4. V_{CB} is negative and V_{BE} is negative

Question Number : 122 Question Id : 61097514350 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In a JFET, drain current is primarily controlled by

Options :

1. Size of depletion region
2. Channel resistance
3. Gate reverse bias
4. Voltage drop across channel

Question Number : 123 Question Id : 61097514351 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

MOSFET can be used as a _____

Options :

1. Current controlled capacitor
2. Voltage controlled capacitor
3. Current controlled inductor
4. Voltage controlled inductor

Question Number : 124 Question Id : 61097514352 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In a single stage R-C coupled amplifier, what are the phase shifts introduced at lower and upper 3 dB frequencies, respectively?

Options :

1. 45° , 225°
2. 45° , 135°
3. 90° , 180°
4. 45° , 180°

Question Number : 125 Question Id : 61097514353 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Cascaded amplifiers are used as _____

Options :

1. video amplifiers
2. voltage amplifiers
3. power amplifiers
4. tuned amplifier design

Question Number : 126 Question Id : 61097514354 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In a Wien bridge oscillator, the positive feedback attenuation is _____

Options :

1. $1/3$
2. $1/29$
3. $-1/29$
4. 3

Question Number : 127 Question Id : 61097514355 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The multivibrator circuit which possesses one stable state and one quasi-stable state is

Options :

1. Astable
2. Monostable
3. Bistable
4. Schmitt trigger circuit

Question Number : 128 Question Id : 61097514356 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The octal equivalent of decimal 98 is _____

Options :

1. 89
2. 98
3. 142
4. 241

Question Number : 129 Question Id : 61097514357 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

A logic gate is an electronic circuit which _____

Options :

1. Operates on binary algebra
2. Performs arithmetic and logic functions
3. Allows flow of electrons only in one direction
4. Alternates between 0 and 1 values

Question Number : 130 Question Id : 61097514358 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

The output of a 2-input OR gate is zero only when its _____

Options :

1. Either input is 0
2. Either input is 1
3. Both inputs are 1
4. Both inputs are 0

Question Number : 131 Question Id : 61097514359 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Which of the following circuits come under the class of combinational logic circuits?

a) full adder b) full subtractor c) half adder d) register e) counter

Options :

1. a only
2. c and e
3. d and e
4. a, b and c

Question Number : 132 Question Id : 61097514360 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

What are the output bits S (sum) and C (carry) of a half adder having input A=1 and B=1?

Options :

1. S=1, C=1
2. S=1, C=0
3. S=0, C=1
4. S=0, C=0

Question Number : 133 Question Id : 61097514361 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A J-K flip flop can be made from an S-R flip flop by using two additional _____

Options :

1. NAND gates
2. OR gates
3. NOT gates
4. NOR gates

Question Number : 134 Question Id : 61097514362 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A ring counter consisting of five flip-flops will have _____

Options :

1. 5 states
2. 10 states
3. 32 states
4. Infinite states

Question Number : 135 Question Id : 61097514363 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Among the following four, the slowest analog-to-digital converter is _____

Options :

1. Parallel comparator (i.e. flash) type
2. Successive approximation type
3. Integrating type
4. Counting type

Question Number : 136 Question Id : 61097514364 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The resolution of Digital-to-Analog converter is governed by which one of the following (where n is the number of digital inputs)?

Options :

1. $2n$
2. $2/n$
3. $(2)^n$
4. $\sqrt{2^n}$

Question Number : 137 Question Id : 61097514365 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which one of the following statements about RAM is not correct?

Options :

1. RAM stands for Random Access Memory
2. It is also called read/write memory
3. When power supply is switched off, the information in RAM is usually lost

The binary contents are entered or stored in the RAM chip during the

4. manufacturing

Question Number : 138 Question Id : 61097514366 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The response of a galvanometer is independent of its _____

Options :

1. Controlling torque
2. Number of turns
3. Circuit resistance
4. Capacitance

Question Number : 139 Question Id : 61097514367 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The voltmeter of choice for measuring the emf of a 100 V dc source would be

Options :

1. 100 V, 1 mA
2. 100 V, 2 mA
3. 100 V, 10 k Ω /V
4. 100 V, 100 Ω /V

Question Number : 140 Question Id : 61097514368 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Moving iron and PMMC instruments can be distinguished from each other by looking

at _____

Options :

1. Pointer
2. Terminal size
3. Scale

4. Scale range

Question Number : 141 Question Id : 61097514369 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

To increase current measurement range of an ammeter, it is _____

Options :

1. Shunted by a high resistance
2. Put in series with a high resistance
3. Put in series with a low resistance
4. Shunted by a low resistance

Question Number : 142 Question Id : 61097514370 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the approximate input impedance of a CRO?

Options :

1. Zero
2. $1\text{ M}\Omega$
3. $10\ \Omega$

100 $\mu\Omega$

4.

Question Number : 143 Question Id : 61097514371 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a CRT, the highest positive potential is given to _____

Options :

1. Focusing electrodes
2. Cathode
3. Vertical deflection plates
4. Post deflection acceleration anode

Question Number : 144 Question Id : 61097514372 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The Q-meter works on the principle of _____

Options :

1. mutual inductance
2. self-inductance
3. series resonance

4. parallel resonance

Question Number : 145 Question Id : 61097514373 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The sine wave output of a function generator is fed to both the horizontal (X) and vertical (Y) inputs of a CRO. What will be the pattern on the cathode ray screen?

Options :

1. A circle
2. An ellipse
3. A straight line with 45° slope
4. Sinusoidal

Question Number : 146 Question Id : 61097514374 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which one of the following is a derived unit (not a fundamental unit) in SI system?

Options :

1. Candela
2. Coulomb

3. Kelvin

4. mol.

Question Number : 147 Question Id : 61097514375 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Linear variable differential transformer has _____

Options :

1. Two primary coils connected in phase and a secondary coil
2. Two primary coils connected in opposition and a secondary coil
3. One primary coil and two secondary coils connected in phase
4. One primary coil and two secondary coils connected in opposition

Question Number : 148 Question Id : 61097514376 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A linear variable differential transformer (LVDT) is _____

Options :

1. A displacement transducer
2. An impedance matching transformer

3. A differential temperature sensor
4. An auto transformer

Question Number : 149 Question Id : 61097514377 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A strain gauge has gauge factor $G = -100$. The type of the strain gauge is _____

Options :

1. Unbounded metal type
2. Bounded metal foil type
3. p-type semi-conductor
4. n-type semi-conductor

Question Number : 150 Question Id : 61097514378 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For signal conditioning of a piezoelectric type transducer, we require _____

Options :

1. A charge amplifier
2. A differential amplifier

3. An instrumentation amplifier
4. A trans-conductance amplifier

Question Number : 151 Question Id : 61097514379 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The operation of a Pirani gauge is based on_____

Options :

1. Ionization of gas at low pressure
2. Variation of volume with pressure
3. Variation of viscosity with pressure
4. Variation of thermal conductivity of gas with pressure

Question Number : 152 Question Id : 61097514380 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

An example of variable area device for measuring flow is_____

Options :

1. Flow nozzle
2. Orifice meter

3. Venturimeter

4. Rotameter

Question Number : 153 Question Id : 61097514381 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following meters has the lowest pressure drop for a given range of flow?

Options :

1. Orifice meter

2. Venturi meter

3. Flow nozzle

4. Rotameter

Question Number : 154 Question Id : 61097514382 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Liquid flow rate is measured using _____

Options :

1. A Pirani gauge

2. A pyrometer

3. An orifice plate

4. A Bourdon tube

Question Number : 155 Question Id : 61097514383 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

In the measurement of pH, a reference electrode made of is used.

Options :

steel and consists of an inner assembly containing a solution of calomel and

1. mercury

glass and consists of an inner assembly containing a solution of calomel

2. and mercury

3. glass and consists of an inner assembly containing a solution of mercury

4. glass and consists of an inner assembly containing a solution of HCl

Question Number : 156 Question Id : 61097514384 Question Type : MCQ Display Question

Number : Yes Is Question Mandatory : No Single Line Question Option : No Option

Orientation : Vertical

Measurement of viscosity involves measuring _____

Options :

1. Frictional force

2. Corioli's force
3. Centrifugal force
4. Buoyant force

Question Number : 157 Question Id : 61097514385 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The method that can be employed for measuring only fluid level is _____

Options :

1. Radioactive method
2. Bellows
3. Strain gauge
4. Bourdon tube

Question Number : 158 Question Id : 61097514386 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The function of the reference electrode in a pH meter is to provide _____

Options :

1. A constant current

2. A constant voltage
3. Temperature compensation
4. A constant voltage and temperature compensation

Question Number : 159 Question Id : 61097514387 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The method used for analysis of gases and their mixtures is _____

Options :

1. Thermal conductivity
2. Electrical conductivity
3. Relative humidity
4. Specific gravity

Question Number : 160 Question Id : 61097514388 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Cascade control means _____

Options :

1. Feed forward control

2. More than one feedback loop
3. on-off control
4. one feedback loop

Question Number : 161 Question Id : 61097514389 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Process degree of freedom indicates _____ number of controllers to be used

Options :

1. The maximum
2. The minimum
3. Both maximum and minimum
4. zero

Question Number : 162 Question Id : 61097514390 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Reset rate is the another term used for _____ time

Options :

1. dead

2. Integral

3. Derivative

4. lag

Question Number : 163 Question Id : 61097514391 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

On-off controllers are normally used for _____

Options :

1. low loads

2. temperature changes

3. flow rate changes

4. pressure changes

Question Number : 164 Question Id : 61097514392 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The offset introduced by proportional controller with gain K_C in response of first order system can be reduced by _____

Options :

1. reducing value of K_c
2. introducing integral control
3. introducing derivative control
4. increasing value of K_c

Question Number : 165 Question Id : 61097514393 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following system provides excellent transient and steady state response?

Options :

1. Proportional action
2. Proportional + Integral action
3. Proportional + Derivative action
4. Proportional + Integral + Derivative action

Question Number : 166 Question Id : 61097514394 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The basic function of the spring in a control valve is to _____

Options :

1. Characterize flow
2. oppose the diaphragm so as to position the valve according to signal pressure
3. close the valve if air failure occurs
4. open the valve if air failure occurs

Question Number : 167 Question Id : 61097514395 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The primary controller in a cascade control system must always be tuned _____

Options :

1. faster than the secondary
2. with the same parameters as the master
3. with greater filtering than the secondary
4. after the secondary is tuned

Question Number : 168 Question Id : 61097514396 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The Ratio control is where _____

Options :

1. one variable is controlled in proportion to another
2. a wild flow variable sets the gain of the controller
3. process data is communicated in a digital format
4. the rate of one variable must remain fixed over time

Question Number : 169 Question Id : 61097514397 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Adaptive gain is used for controlling _____ processes

Options :

1. non-linear
2. time invariant
3. dead time
4. integrating

Question Number : 170 Question Id : 61097514398 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Identify the following line types from left to right.



Options :

1. pneumatic, electric, capillary, hydraulic
2. electric, pneumatic, digital network, filled system
3. pneumatic, electric, hydraulic, mechanical link
4. pneumatic, mechanical link, hydraulic, capillary

Question Number : 171 Question Id : 61097514399 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In CNC systems multiple microprocessors and programmable logic controllers work

Options :

1. in parallel
2. in series
3. one after other
4. for 80% of the total machining time

Question Number : 172 Question Id : 61097514400 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the name for information sent from robot sensors to robot controllers?

Options :

1. temperature
2. pressure
3. feedback
4. signal

Question Number : 173 Question Id : 61097514401 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The number of moveable joints in the base, the arm, and the end effectors of the robot determines _____

Options :

1. degrees of freedom
2. payload capacity
3. operational limits
4. flexibility

Question Number : 174 Question Id : 61097514402 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A band limited signal with highest frequency constant of 1000 Hz is undergoing sampling at uniform intervals. For recovery of the original signal in an unambiguous way, the sampling frequency should be necessarily greater than _____

Options :

1. 500 Hz
2. 100 Hz
3. 1500 Hz
4. 2000 Hz

Question Number : 175 Question Id : 61097514403 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A phase locked loop can be employed for demodulation of _____

Options :

1. Pulse amplitude modulation signal
2. Pulse code modulation signal
3. Frequency modulation signal
4. Signal side band amplitude modulation signals

Question Number : 176 Question Id : 61097514404 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A sinusoidal signal of frequency 1 kHz is used to produce an FM signal with a modulation index $\beta = 5$. The bandwidth (where 98% of power is contained) of the FM signal is _____

Options :

1. 2 kHz
2. 3 kHz
3. 6 kHz
4. 12 kHz

Question Number : 177 Question Id : 61097514405 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

An op-amp has a common mode gain of 0.01 and a differential mode gain of 10^5 . Its CMRR would be _____

Options :

1. 10^{-7}
2. 10^{-3}
3. 10^3

4. 10^7

Question Number : 178 Question Id : 61097514406 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

An ideal op-amp has the characteristics of an ideal _____

Options :

1. voltage controlled voltage source
2. voltage controlled current source
3. current controlled voltage source
4. current controlled current source

Question Number : 179 Question Id : 61097514407 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The zero level detector is one application of a _____

Options :

1. Differentiator
2. Integrator
3. Summing amplifier

4. Comparator

Question Number : 180 Question Id : 61097514408 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A sinusoidal waveform can be converted to a square waveform by using a ____

Options :

1. two stage transistorized overdriven amplifier
2. two stage diode detector circuit
3. voltage comparator based op-amp
4. regenerative voltage comparator circuit

Question Number : 181 Question Id : 61097514409 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Typically an instrumentation amplifier has an external resistor used for ____

Options :

1. establishing the input impedance
2. setting the voltage gain
3. setting the current gain

4. interfacing with an instrument

Question Number : 182 Question Id : 61097514410 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

IR spectroscopy _____

Options :

1. Has a useful range of radiation from 2.5 to 15 microns
2. Is unsuitable for analysis of mixture of metals
3. Is unsuitable for analysis of organic gases
4. Uses bolometer as one of the detectors

Question Number : 183 Question Id : 61097514411 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a spectrophotometer, the monochromator must be able to resolve two wavelengths

599.9 nm and 600.01 nm. The required resolution is _____

Options :

1. 100
2. 1000

3. 3000

3.

4. 5000

4.

Question Number : 184 Question Id : 61097514412 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Beer Lambert's law gives the relation between which of the following?

Options :

1. Reflected radiation and concentration
2. Scattered radiation and concentration
3. Energy absorption and concentration
4. Energy absorption and reflected radiation

Question Number : 185 Question Id : 61097514413 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In photometers, the readings of the specimen are initially obtained in the form of which of the following parameters?

Options :

1. Transmittance
- 2.

Absorption

3. Wavelengths
4. Volume

Question Number : 186 Question Id : 61097514414 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is the disadvantage of hydrogen, which can be used as carrier gas in gas chromatography?

Options :

1. dangerous to use
2. expensive
3. reduced sensitivity
4. high density

Question Number : 187 Question Id : 61097514415 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following will improve the efficiency of the separation process in liquid chromatography?

Options :

1. Increase in sample size, increase in column diameter
2. Reduction in sample size, increase in column diameter
3. Increase in sample size, reduction in column diameter
4. Reduction in sample size, reduction in column diameter

Question Number : 188 Question Id : 61097514416 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Process of changing resting potential to action potential is known as _____

Options :

1. Polarization
2. Re polarization
3. Depolarization
4. Uni polarization

Question Number : 189 Question Id : 61097514417 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is useful for the measurement of action potentials of muscles?

Options :

1. ECG

2. EEG

3. EMG

4. ETS

Question Number : 190 Question Id : 61097514418 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Korotkoff sounds are used _____

Options :

1. As a reference for sound level measurement
2. For studying heart muscle functioning
3. For blood pressure measurement
4. For study of heart valve functioning

Question Number : 191 Question Id : 61097514419 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In an electromagnetic blood flow meter, the induced voltage is directly proportional to the _____

Options :

1. Blood flow rate

2. Square root of the blood flow rate
3. Square of the blood flow rate
4. Logarithm of the blood flow rate

Question Number : 192 Question Id : 61097514420 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following is a preferred electrode for measuring EMG?

Options :

1. surface electrodes
2. needle electrodes
3. pre-gelled electrodes
4. scalp electrodes

Question Number : 193 Question Id : 61097514421 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In PLC, which of the following bus is a bidirectional bus?

Options :

1. System bus

2. Control bus
3. Data bus
4. Address bus

Question Number : 194 Question Id : 61097514422 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following instruction set is used to change the state of a function?

Options :

1. normally open
2. normally closed
3. latch/unlatch
4. differentiation up

Question Number : 195 Question Id : 61097514423 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The total response time of a PLC is _____

Options :

1. Sum of Input response time and Program execution time

2. Sum of Input response time and output response time
3. Sum of Program execution time and output response time
4. Sum of Input response time, Program execution time and output response time

Question Number : 196 Question Id : 61097514424 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

When the 8051 micro controller executes some arithmetic operations, then the flag bits of which register are affected?

Options :

1. PSW
2. SP
3. DPTR
4. PC

Question Number : 197 Question Id : 61097514425 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the function of the TMOD register?

Options :

1. TMOD register is used to set different timers or counters to their appropriate modes

2. TMOD register is used to load the count of the timer.

3. Is the destination or the final register where the result is obtained after the operation of the timer

4. Is used to interrupt the timer

Question Number : 198 Question Id : 61097514426 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A micro controller at-least should consist of _____

Options :

1. RAM, ROM, I/O devices, serial and parallel ports and timers

2. CPU, RAM, I/O devices, serial and parallel ports and timers

3. CPU, RAM, ROM, I/O devices, serial and parallel ports and timers

4. CPU, ROM, I/O devices and timers

Question Number : 199 Question Id : 61097514427 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

How many pins of the 8255 can be used as the I/O ports?

Options :

1. 8

2. 16

3. 24

4. 32

Question Number : 200 Question Id : 61097514428 Question Type : MCQ Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

When 8051 wakes up then 0x00 is loaded to which register?

Options :

1. DPTR

2. SP

3. PC

4. PSW