

Andhra Pradesh State Council of Higher Education

Notations :

- 1.Options shown in green color and with ✓ icon are correct.
- 2.Options shown in red color and with ✗ icon are incorrect.

Question Paper Name :	Electronics and Communication Engineering 23rd Apr 2026 Shift 2
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Electronics and Communication Engineering

Group Number :	1
Group Id :	77951866
Group Maximum Duration :	0
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Show Attended Group? :	No
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Mathematics

Section Id :	779518257
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory

Number of Questions :	50
Number of Questions to be attempted :	50
Section Marks :	50
Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518273
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 77951813009 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $3A + 4B^T = \begin{bmatrix} 7 & -10 & 17 \\ 0 & 6 & 31 \end{bmatrix}$ and $2B - 3A^T = \begin{bmatrix} -1 & 18 \\ 4 & -6 \\ -5 & -7 \end{bmatrix}$ then $B =$ _____

Options :

1. ✘ $\begin{bmatrix} 1 & 3 \\ -1 & 0 \\ -2 & -4 \end{bmatrix}$

2. ✘ $\begin{bmatrix} 1 & 3 \\ 1 & 0 \\ 2 & 4 \end{bmatrix}$

3. ✔ $\begin{bmatrix} 1 & 3 \\ -1 & 0 \\ 2 & 4 \end{bmatrix}$

4. ✘ $\begin{bmatrix} -1 & -3 \\ 1 & 0 \\ 2 & 4 \end{bmatrix}$

Question Number : 2 Question Id : 77951813010 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If A and B are 4×4 matrices such that $A^2 + B = A^2B$ then which of the following is correct?

Options :

1. ✘ $AB = I$

2. ✘ $A^2B = I$

3. ✔ $A^2B = BA^2$

4. ✘ $A^2 = I$ or $B = I$

Question Number : 3 Question Id : 77951813011 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If A is a matrix of order 3×3 and $|\text{adj}(\text{adj}(\text{adj}A))| = 12^4$, then the value of $|A^{-1}\text{adj}A| = \underline{\hspace{2cm}}$

Options :

1. ✘ 1

2. ✘ 12

3. ✔ $2\sqrt{3}$

4. ✘ $\sqrt{6}$

Question Number : 4 Question Id : 77951813012 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If A is a 4×4 matrix and $|2A| = 64$, $B = \text{adj}A$ then $|\text{Adj}B| = \underline{\hspace{2cm}}$

Options :

1. ✔ 2^{18}

2. ✘ 2^{36}

3. ✘ 2^6

4. ✘ 2^9

Question Number : 5 Question Id : 77951813013 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

For what value of λ , the system of equations $x+2y+\lambda z=0$, $x+2y+z=6$, $x+2y+3z=10$, has no solution. _____

Options :

1. ✘ 2

2. ✔ 3

3. ✘ 4

4. ✘ 5

Question Number : 6 Question Id : 77951813014 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\frac{42-19x}{(x^2+1)(x-4)} = \frac{Ax+B}{x^2+1} + \frac{C}{x-4}$ then $B =$ _____

Options :

1. ✔ -11

2. ✘ 11

3. ✘ -2

4. ✘ 2

Question Number : 7 Question Id : 77951813015 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\frac{(x+1)^2}{x^3+x} = \frac{A}{x} + \frac{Bx+C}{x^2+1}$, then $\sin^{-1}\left(\frac{A}{C}\right) =$

Options :

1. ✓ $\frac{\pi}{6}$

2. ✗ $\frac{\pi}{4}$

3. ✗ $\frac{\pi}{3}$

4. ✗ $\frac{\pi}{2}$

Question Number : 8 Question Id : 77951813016 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\sin \theta + \cos \theta = \frac{1}{5}$ and $0 \leq \theta < \pi$ then $\tan \theta$ is _____

Options :

1. ✓ $-\frac{4}{3}$

2. ✗ $\frac{3}{4}$

3. ✗ $-\frac{3}{4}$

4. ✗ $\frac{4}{3}$

Question Number : 9 Question Id : 77951813017 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $f(x) = \sin^6 x + \cos^6 x$ then the range of $f(x)$ is _____

Options :

1. ✘ $\left(\frac{1}{4}, \frac{3}{4}\right)$

2. ✘ $\left[\frac{1}{4}, \frac{3}{4}\right]$

3. ✔ $\left[\frac{1}{4}, 1\right]$

4. ✘ $\left[\frac{3}{4}, 1\right]$

Question Number : 10 Question Id : 77951813018 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

$\cos 20^\circ + \cos 80^\circ - \sqrt{3} \cos 50^\circ =$ _____

Options :

1. ✘ -1

2. ✔ 0

3. ✘ 1

4. ✘ $\sqrt{3}$

Question Number : 11 Question Id : 77951813019 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $A = \sin 45^\circ + \cos 45^\circ$ and $B = \sin 44^\circ + \cos 44^\circ$ then which of the following is TRUE

Options :

1. ✓ $A > B$

2. ✗ $A < B$

3. ✗ $A = B$

4. ✗ $AB = 1$

Question Number : 12 Question Id : 77951813020 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If A, B, C are angles of a triangle such that $\cot \frac{A}{2} = 3 \tan \frac{C}{2}$ then $\sin A, \sin B, \sin C$ are in ____

Options :

1. ✓ Arithmetic Progression

2. ✗ Geometric Progression

3. ✗ Harmonic Progression

4. ✗ Arithmetic Geometric Progression

Question Number : 13 Question Id : 77951813021 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In $\triangle ABC$, if $\sin A = \sin^2 B$ and $2 \cos^2 A = 3 \cos^2 B$ then the triangle ABC is _____

Options :

1. ✗ equilateral

2. ✘ isosceles
3. ✔ obtuse angled
4. ✘ right angled

Question Number : 14 Question Id : 77951813022 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$$\sec 855^\circ = \underline{\hspace{2cm}}$$

Options :

1. ✘ 1
2. ✘ $\sqrt{2}$
3. ✔ $-\sqrt{2}$
4. ✘ -1

Question Number : 15 Question Id : 77951813023 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$$\text{The number of solutions of } \sin x = \frac{x}{10} \text{ is } \underline{\hspace{2cm}}$$

Options :

1. ✘ 10
2. ✘ 3
3. ✘ 5
4. ✔ 7

Question Number : 16 Question Id : 77951813024 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the solution of the equation $\sin 5x = 16 \sin^5 x (n \in \mathbb{Z})$?

Options :

1. ✘ $n\pi + \frac{\pi}{6}$

2. ✘ $n\pi - \frac{\pi}{6}$

3. ✘ $n\pi$

4. ✔ $n\pi + \frac{\pi}{3}$

Question Number : 17 Question Id : 77951813025 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\frac{\pi}{2} \leq \theta \leq \frac{3\pi}{4}$ then $\cos^{-1}\left(\frac{5}{13}\sin\theta + \frac{12}{13}\cos\theta\right) = \text{---}$

Options :

1. ✘ $\theta - \tan^{-1}\left(\frac{4}{3}\right)$

2. ✘ $\theta + \tan^{-1}\left(\frac{5}{12}\right)$

3. ✘ $\theta + \tan^{-1}\left(\frac{4}{5}\right)$

4. ✔ $\theta - \tan^{-1}\left(\frac{5}{12}\right)$

Question Number : 18 Question Id : 77951813026 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If z is a complex number such that $|z| + z = 3 + i$, where $i = \sqrt{-1}$, then $|z| = \underline{\hspace{2cm}}$

Options :

1. ✓ $\frac{5}{3}$

2. ✗ $\frac{5}{4}$

3. ✗ $\frac{\sqrt{34}}{3}$

4. ✗ $\frac{\sqrt{41}}{4}$

Question Number : 19 Question Id : 77951813027 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In the complex plane, if the points A and B represent $(1+i)$ and $(-1+i)$ then the angle between OA and OB is

Options :

1. ✗ $\frac{3\pi}{4}$

2. ✗ π

3. ✗ $\frac{\pi}{4}$

4. ✓ $\frac{\pi}{2}$

Question Number : 20 Question Id : 77951813028 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The largest distance from $(-3,2)$ to the circle $x^2 + y^2 - 2x + 2y + 1 = 0$ _____

Options :

1. ✘ 8

2. ✘ 4

3. ✘ 18

4. ✔ 6

Question Number : 21 Question Id : 77951813029 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If the line $3x - 2y + 6 = 0$ meets x-axis and y-axis respectively at A and B , then the equation of the circle with radius AB and centre at A is _____

Options :

1. ✘ $x^2 + y^2 + 4x + 9 = 0$

2. ✔ $x^2 + y^2 + 4x - 9 = 0$

3. ✘ $x^2 + y^2 + 4x + 4 = 0$

4. ✘ $x^2 + y^2 + 4x - 4 = 0$

Question Number : 22 Question Id : 77951813030 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The equation $16x^2 + y^2 + 8xy - 74x - 78y + 212 = 0$ represents _____

Options :

1. ✘ a circle

2. ✓ a parabola

3. ✗ an ellipse

4. ✗ hyperbola

Question Number : 23 Question Id : 77951813031 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The equation of major axis of the ellipse $\frac{(x-1)^2}{9} + \frac{(y-6)^2}{4} = 1$ is

Options :

1. ✗ $y-2=0$

2. ✓ $y=6$

3. ✗ $x-1=0$

4. ✗ $x=9$

Question Number : 24 Question Id : 77951813032 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The equation $\frac{x^2}{7-k} + \frac{y^2}{5-k} = 1$ represents a hyperbola if _____

Options :

1. ✓ $5 < k < 7$

2. ✗ $k > 5$

3. ✘ $k < 5$ or $k > 7$

4. ✘ $k \neq 5, k \neq 7$

Question Number : 25 Question Id : 77951813033 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The vertex of the parabola $y = ax^2 + bx + c$ is _____

Options :

1. ✘ $\left(\frac{b}{2a}, \frac{b^2 - 4ac}{4a} \right)$

2. ✘ $\left(\frac{b}{2a}, \frac{4ac - b^2}{4a} \right)$

3. ✘ $\left(\frac{-b}{2a}, \frac{b^2 - 4ac}{4a} \right)$

4. ✔ $\left(\frac{-b}{2a}, \frac{4ac - b^2}{4a} \right)$

Question Number : 26 Question Id : 77951813034 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

$\lim_{x \rightarrow 0} \left(\frac{|x|}{x} + x + 2 \right) =$ _____

Options :

1. ✘ 0

2. ✘ 1

3. ✘ 2

4. ✓ does not exist

Question Number : 27 Question Id : 77951813035 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$$\lim_{x \rightarrow 0} \frac{e^{x^2} - \cos x}{\sin^2 x} = \underline{\hspace{2cm}}$$

Options :

1. ✗ 3

2. ✓ $\frac{3}{2}$

3. ✗ $\frac{5}{4}$

4. ✗ 2

Question Number : 28 Question Id : 77951813036 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following functions have finite number of points of discontinuity?

Options :

1. ✗ $\tan x$

2. ✗ $x[x]$

3. ✓ $\frac{|x|}{x}$

4. ✗ $\cot x$

Question Number : 29 Question Id : 77951813037 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\left(\frac{x}{a}\right)^n + \left(\frac{y}{b}\right)^n = 2$ then $\frac{dy}{dx}$ at (a,b) is _____

Options :

1. ✘ $\frac{a}{b}$

2. ✘ $-\frac{a}{b}$

3. ✘ $\frac{b}{a}$

4. ✔ $-\frac{b}{a}$

Question Number : 30 Question Id : 77951813038 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The set of all points of differentiability of the function $f(x) = e^{-|x|}$ is

Options :

1. ✘ $(0, \infty)$

2. ✘ $[0, \infty)$

3. ✘ $(-\infty, \infty)$

4. ✔ $(-\infty, \infty) - \{0\}$

Question Number : 31 Question Id : 77951813039 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If there is an error of $\frac{3}{10}\%$ in the volume of a sphere then the percentage error in its radius is

Options :

1. ✓ $\frac{1}{10}$

2. ✗ $\frac{2}{10}$

3. ✗ $\frac{3}{10}$

4. ✗ 3

Question Number : 32 Question Id : 77951813040 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The value of p such that the line joining $(0,3), (5, -2)$ is a tangent to the curve $y = \frac{p}{x+1}$ is

Options :

1. ✗ 23

2. ✓ 4

3. ✗ 3

4. ✗ 1

Question Number : 33 Question Id : 77951813041 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The interval in which $f(x) = 2x^2 - \log x$ increases is _____

Options :

1. ✘ $\left(-\frac{1}{2}, 0\right)$

2. ✘ $\left(0, \frac{1}{2}\right)$

3. ✘ $\left(-\frac{1}{2}, \frac{1}{2}\right)$

4. ✔ $\left(\frac{1}{2}, \infty\right)$

Question Number : 34 Question Id : 77951813042 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The function $y = xe^x$ has _____

Options :

1. ✔ Minimum value at $x = -1$

2. ✘ Minimum value at $x = 0$

3. ✘ Maximum value at $x = -1$

4. ✘ Maximum value at $x = 0$

Question Number : 35 Question Id : 77951813043 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A particle is moving in a straight line such that its distance at any time t is given by

$s = \frac{t^4}{4} - 2t^3 + 4t^2 + 7$ then its acceleration is minimum at $t =$ _____

Options :

1. ✘ 1

2. ✔ 2

3. ✘ $\frac{1}{2}$

4. ✘ $\frac{3}{2}$

Question Number : 36 Question Id : 77951813044 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\int \frac{1}{(x+100)\sqrt{x+99}} dx = f(x) + c$ then $f(x) = \underline{\hspace{2cm}}$

Options :

1. ✘ $2\sqrt{(x+100)}$

2. ✘ $3\sqrt{(x+100)}$

3. ✔ $2 \tan^{-1} \sqrt{x+99}$

4. ✘ $2 \tan^{-1} \sqrt{x+100}$

Question Number : 37 Question Id : 77951813045 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$\int \frac{1 + \cos 4x}{\cot x - \tan x} dx = \underline{\hspace{2cm}}$

Options :

1. ✘ $\frac{1}{4} \cos 4x + c$

2. ✘ $\frac{1}{8} \cos 4x + c$

3. ✘ $-\frac{1}{4} \cos 4x + c$

4. ✔ $-\frac{1}{8} \cos 4x + c$

Question Number : 38 Question Id : 77951813046 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $I_n = \int \frac{t^n}{1+t^2} dt$ then $I_6 + I_4 =$ _____

Options :

1. ✘ $\frac{t^3}{3}$

2. ✘ $\frac{t^4}{4}$

3. ✔ $\frac{t^5}{5}$

4. ✘ $\frac{t^7}{7}$

Question Number : 39 Question Id : 77951813047 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

$\int (x+1)^2 e^x dx =$ _____

Options :

1. ✘ $xe^x + c$

2. ✘ $x^2 e^x + c$

3. ✘ $(x+1)e^x + c$

4. ✔ $(x^2 + 1)e^x + c$

Question Number : 40 Question Id : 77951813048 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $\int \frac{2x^2 + a^2}{x^2(x^2 + a^2)} dx = \frac{k}{x} + \frac{1}{a} \tan^{-1} \frac{x}{a} + c$ then $k =$ _____

Options :

1. ✘ 0

2. ✔ -1

3. ✘ 1

4. ✘ $\frac{1}{a}$

Question Number : 41 Question Id : 77951813049 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $k \int_0^1 xf(3x)dx = \int_0^3 tf(t)dt$ then $k =$ _____

Options :

1. ✔ 9

2. ✘ 3

3. ✘ $\frac{1}{9}$

4. ✘ $\frac{1}{3}$

Question Number : 42 Question Id : 77951813050 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$$\int_a^b (|x-a| + |x-b|) dx = \text{_____}, (0 < a < b)$$

Options :

1. ✔ $(b-a)^2$

2. ✘ $(b-a)$

3. ✘ $(b+a)$

4. ✘ $(b+a)^2$

Question Number : 43 Question Id : 77951813051 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$$\int_0^2 [x^2] dx = \text{_____}$$

Options :

1. ✘ 0

2. ✔ $5 - \sqrt{2} - \sqrt{3}$

3. ✘

$$5 + \sqrt{2} + \sqrt{3}$$

4. ✘ $\sqrt{2} + \sqrt{3} + \sqrt{5}$

Question Number : 44 Question Id : 77951813052 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If the order and degree of a differential equation $\left(\frac{d^4y}{dx^4} + \frac{d^2y}{dx^2}\right)^{\frac{5}{2}} = 10\frac{d^2y}{dx^2}$ are p and q respectively, then $p + q =$

Options :

1. ✔ 9

2. ✘ 6

3. ✘ 7

4. ✘ 10

Question Number : 45 Question Id : 77951813053 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The differential equation of the family of concentric circles with Centre at the origin is

Options :

1. ✘ $x = y \frac{dy}{dx}$

2. ✘ $\frac{dy}{dx} = \frac{y}{x}$

3. ✔ $x dx + y dy = 0$

4. ✘ $x dy + y dx = 0$

Question Number : 46 Question Id : 77951813054 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

$\frac{dy}{dx} = xy + x + y + 1$ has the solution

Options :

1. ✘ $\log(y+1) = x^2 + x + c$

2. ✘ $\log(y+1) = x + c$

3. ✘ $\log(y+1) = -x + c$

4. ✔ $\log(y+1) = \frac{x^2}{2} + x + c$

Question Number : 47 Question Id : 77951813055 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The general solution of $\frac{ydx - xdy}{y^2} = 0$ represents a family of

Options :

1. ✔ Straight lines passing through the origin

2. ✘ Circles

3. ✘ parabolas

4. ✘ Hyperbolas

Question Number : 48 Question Id : 77951813056 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is an integrating factor for the differential equation

$$x \cos x \frac{dy}{dx} + (x \sin x + \cos x)y = 1 ?$$

Options :

1. ✘ $x \cos x$
2. ✘ $x \sin x$
3. ✔ $x \sec x$
4. ✘ $x \operatorname{cosec} x$

Question Number : 49 Question Id : 77951813057 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The equation of the curve passing through the origin and satisfying the differential equation

$$\frac{dy}{dx} = (x - y)^2 \text{ is } \underline{\hspace{2cm}}$$

Options :

1. ✔ $e^{2x}(1 - x + y) = 1 + x - y$
2. ✘ $e^{2x}(1 + x - y) = 1 - x + y$
3. ✘ $e^{2x}(1 + x + y) = 1 - x + y$
4. ✘ $e^{2x}(1 - x + y) = -(1 + x + y)$

Question Number : 50 Question Id : 77951813058 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If the solution $y(x)$ of the given differential equation $(e^y + 1)\cos x dx + e^y \sin x dy = 0$ passes

through the point $\left(\frac{\pi}{2}, 0\right)$, then the value of $e^{y\left(\frac{\pi}{6}\right)}$ is

Options :

1. ✖ 2

2. ✔ 3

3. ✖ e^2

4. ✖ e^{-3}

Physics

Section Id :	779518258
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25
Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518274
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 77951813059 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If F is the force, S is the displacement and V is the velocity of the particle, the dimensions of the ratio FS/V^2 will be

Options :

1. ✖

$$M^0L^0T^0$$

2. ✓ $M^1L^0T^0$

3. ✗ M^0L^0T

4. ✗ $M^0L^0T^0$

Question Number : 52 Question Id : 77951813060 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Among the following, unit less quantity is

Options :

1. ✗ Velocity gradient

2. ✗ Pressure gradient

3. ✓ Displacement gradient

4. ✗ Force gradient

Question Number : 53 Question Id : 77951813061 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the component of one vector in the direction of another vector is zero, then those two vectors are

Options :

1. ✗ parallel to each other

2. ✓ perpendicular to each other

3. ✘ opposite to each other

4. ✘ coplanar vectors

Question Number : 54 Question Id : 77951813062 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the resultant of two vectors is equal to either of vectors, the angle between them is

Options :

1. ✘ 30^0

2. ✘ 60^0

3. ✘ 90^0

4. ✔ 120^0

Question Number : 55 Question Id : 77951813063 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The angle made by the vector $(2\hat{i}+2\hat{j})$ with X-axis is

Options :

1. ✔ 45^0

2. ✘ 60^0

3. ✘ 90^0

4. ✘ 120^0

Question Number : 56 Question Id : 77951813064 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The length of a vector $(3\hat{i} + \hat{j} + 2\hat{k})$ in XY plane is

Options :

1. ✘ $\sqrt{14}$

2. ✘ 2

3. ✔ $\sqrt{10}$

4. ✘ $\sqrt{5}$

Question Number : 57 Question Id : 77951813065 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A stone projected up with a velocity 'u' reaches two points A and B at a distance 'h' with velocities $u/2$ and $u/3$. The maximum height reached by the stone is

Options :

1. ✘ $\frac{9h}{5}$

2. ✘ $\frac{27h}{4}$

3. ✘ $\frac{36h}{27}$

4. ✔

$$\frac{36h}{5}$$

Question Number : 58 Question Id : 77951813066 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A ball is thrown at a speed of 20 m s^{-1} at an angle of 30° with the horizontal. The maximum height reached by the ball is ($g = 10 \text{ ms}^{-2}$)

Options :

1. ✘ 2 m

2. ✘ 3 m

3. ✘ 4 m

4. ✔ 5 m

Question Number : 59 Question Id : 77951813067 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A body of mass 2 kg is moving with a constant acceleration of $(2\hat{i}+3\hat{j}-\hat{k}) \text{ ms}^{-2}$. If the displacement made by the body is $(3\hat{i}-\hat{j} + 2\hat{k}) \text{ m}$ then the work done is

Options :

1. ✔ 2 J

2. ✘ 10 J

3. ✘ 12 J

4. ✘ 22 J

Question Number : 60 Question Id : 77951813068 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The average power generated by a 90 kg mountain climber who climbs a summit of height 600 m in 90 minutes is ($g = 10 \text{ ms}^{-2}$)

Options :

1. ✓ 100 W
2. ✗ 25 W
3. ✗ 200 W
4. ✗ 50 W

Question Number : 61 Question Id : 77951813069 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A body of mass 16 kg explodes into two pieces of masses 4 kg and 12 kg. The velocity of the 12 kg mass is 4 ms^{-1} . The kinetic energy of the second piece is

Options :

1. ✗ 96 J
2. ✗ 144 J
3. ✗ 192 J
4. ✓ 288 J

Question Number : 62 Question Id : 77951813070 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Two bodies of masses of 1 g and 4 g are moving with equal kinetic energies. The ratio of the magnitudes of their linear momenta is

Options :

1. ✘ 4 : 1

2. ✘ $\sqrt{2} : 1$

3. ✔ 1 : 2

4. ✘ 1 : 16

Question Number : 63 Question Id : 77951813071 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A sound absorber attenuates the sound level by 20 dB. The intensity decreases by a factor of

Options :

1. ✘ 10

2. ✔ 100

3. ✘ 1000

4. ✘ 10000

Question Number : 64 Question Id : 77951813072 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A source of sound is moving towards a wall with a speed of 20 ms^{-1} . The frequency of the sound produced by the source is 400 Hz . If the speed of the sound is 340 ms^{-1} , the beat frequency heard by a person standing near the wall is

Options :

1. ✓ 0 Hz
2. ✗ 2 Hz
3. ✗ 5 Hz
4. ✗ 10 Hz

Question Number : 65 Question Id : 77951813073 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A person standing between two parallel hills fires a gun. He hears the first echo after 1.5 sec and second echo after 2.5 sec. If the speed of a sound is 332 ms^{-1} , the distance between the hills is

Options :

1. ✗ 654 m
2. ✓ 664 m
3. ✗ 674 m
4. ✗ 684 m

Question Number : 66 Question Id : 77951813074 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The velocity of sound in air is 330 ms^{-1} . To increase the apparent frequency of the sound by 50 %, the source should move towards the stationary observer with a velocity equal to

Options :

1. ✘ 330 ms^{-1}

2. ✘ 220 ms^{-1}

3. ✘ 165 ms^{-1}

4. ✔ 110 ms^{-1}

**Question Number : 67 Question Id : 77951813075 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

If the total absorption of a hall is doubled, the reverberation time will

Options :

1. ✘ Double

2. ✔ Become half

3. ✘ Remain same

4. ✘ Become four times

**Question Number : 68 Question Id : 77951813076 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The volume V of an enclosure contains a mixture of gases like 16 g of oxygen, 28 g of nitrogen and 44 g of carbon dioxide at absolute temperature T . The pressure of the mixture of gases is (R is universal gas constant)

Options :

1. ✘ $3RT/V$
2. ✘ $4RT/V$
3. ✔ $5RT/2V$
4. ✘ $88RT/V$

Question Number : 69 Question Id : 77951813077 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Certain quantity of heat is supplied to a monoatomic ideal gas which expands at constant pressure. The percentage of heat that goes into work done by the gas is

Options :

1. ✘ 20%
2. ✔ 40%
3. ✘ 60%
4. ✘ 80%

Question Number : 70 Question Id : 77951813078 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The wrong statement among the following is

Options :

1. ✘ During free expansion, temperature of ideal gas does not change
2. ✘ During free expansion, temperature of real gas decreases
3. ✔ During free expansion of real gas temperature does not change
4. ✘ Free expansion is conducted in adiabatic manner

Question Number : 71 Question Id : 77951813079 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A monoatomic ideal gas, initially at temperature T_1 is enclosed in a cylinder fitted with a frictionless piston. The gas is allowed to expand adiabatically to a temperature T_2 by releasing the piston suddenly. If L_1 and L_2 are the lengths of the gas column, before and after the expansion, then the value of T_1/T_2 will be

Options :

1. ✘ $(L_1/L_2)^{2/3}$
2. ✔ $(L_2/L_1)^{2/3}$
3. ✘ L_2/L_1
4. ✘ L_1/L_2

Question Number : 72 Question Id : 77951813080 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A gas behaves more closely as an ideal gas at

Options :

1. ✘ Low pressure and low temperature
2. ✔ Low pressure and high temperature
3. ✘ High pressure and low temperature
4. ✘ High pressure and high temperature

**Question Number : 73 Question Id : 77951813081 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

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 energy and wavelength of incident radiation are

Options :

1. ✔ 3.1 eV, 4000 Å
2. ✘ 2.2 eV, 2000 Å
3. ✘ 2.2 eV, 4000 Å
4. ✘ 3.1 eV, 2000 Å

**Question Number : 74 Question Id : 77951813082 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The core of an optical fibre is surrounded by

Options :

1. ✓ Cladding
2. ✘ Plastic jacket
3. ✘ Air
4. ✘ Metal sheath

Question Number : 75 Question Id : 77951813083 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The favourable condition for superconducting state of a matter is

Options :

1. ✘ A weak electron-phonon interaction
2. ✓ A strong electron-phonon interaction
3. ✘ A strong phonon -phonon interaction
4. ✘ A weak phonon -phonon interaction

Chemistry

Section Id :	779518259
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	25
Number of Questions to be attempted :	25
Section Marks :	25

Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518275
Question Shuffling Allowed :	Yes

Question Number : 76 Question Id : 77951813084 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In which of the following, the number of unpaired electrons is maximum?

Options :

1. ✘ P^{3-} (Z=15)
2. ✔ S (Z=16)
3. ✘ Cl (Z=17)
4. ✘ Al^{3+} (Z=13)

Question Number : 77 Question Id : 77951813085 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The n, l values possible for a sublevel with seven degenerate orbitals are respectively (where n, l represent the symbols of principal and Azimuthal quantum numbers respectively)

Options :

1. ✔ 4, 3
2. ✘ 3, 4
3. ✘ 5, 1
4. ✘ 6, 2

Question Number : 78 Question Id : 77951813086 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The number of electrons with magnetic quantum number, $m_l = 0$ in chloride ion is (Cl ($Z=17$))

Options :

1. ✘ 6
2. ✘ 8
3. ✔ 10
4. ✘ 18

Question Number : 79 Question Id : 77951813087 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Atomic numbers of four elements A, B, C and D are $(Z-1)$, $(Z+2)$, Z and $(Z+1)$, respectively. If $Z=9$, the type of bonding between A and B is (where Z = Atomic number of element)

Options :

1. ✘ Dative bond
2. ✘ Polar Covalent bond
3. ✔ Electrovalent bond
4. ✘ Non polar Covalent bond

Question Number : 80 Question Id : 77951813088 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Identify the molecule in which central atom is not obeying the octet rule.

Options :

1. ✘ H_2O
2. ✘ PCl_3
3. ✔ BF_3
4. ✘ NH_3

Question Number : 81 Question Id : 77951813089 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The mass of Na_2CO_3 (in g) (M.wt=106) present in 1.0 L of 0.05 M solution is

Options :

1. ✘ 0.53
2. ✘ 53.0
3. ✘ 26.5
4. ✔ 5.30

Question Number : 82 Question Id : 77951813090 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A gaseous mixture contains 14 g of N_2 , 8.0 g of O_2 and 8.0 g of H_2 . Total number of molecules present in the mixture is (N_A = Avogadro number)

(At.wt; H=1, N=14, O=16)

Options :

1. ✘ $2.75 N_A$
2. ✘

3.75 N_A

3. ✓ 4.75 N_A

4. ✗ 1.50 N_A

Question Number : 83 Question Id : 77951813091 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The ratio of equivalent weights of HNO_3 and H_2SO_4 is

Options :

1. ✗ 9:5

2. ✗ 6:5

3. ✗ 7:9

4. ✓ 9:7

Question Number : 84 Question Id : 77951813092 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following cannot act as a buffer?

Options :

1. ✗ $NH_4OH + NH_4Cl$

2. ✗ $CH_3COOH + CH_3COONa$

3. ✗ $H_2CO_3 + Na_2CO_3$

4. ✓ $HCl + NaCl$

Question Number : 85 Question Id : 77951813093 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

200 mL of 0.1 M NaOH is allowed to react completely with 100 mL of 0.1 M HCl and the solution is diluted to 1.0 L by adding water. The pH of the mixture is

Options :

1. ✘ 3

2. ✘ 11

3. ✘ 2

4. ✔ 12

Question Number : 86 Question Id : 77951813094 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is an example of non-electrolyte?

Options :

1. ✘ CH_3COONa

2. ✘ NaCl

3. ✘ NaOH

4. ✔ $\text{C}_2\text{H}_5\text{OH}$

Question Number : 87 Question Id : 77951813095 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a galvanic cell, electrons flow from

Options :

1. ✘ anode to cathode through the solution
2. ✘ cathode to anode through the solution
3. ✔ anode to cathode through the external circuit
4. ✘ cathode to anode through the external circuit

Question Number : 88 Question Id : 77951813096 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Saturated solution of KNO_3 is used to make salt bridge because

Options :

1. ✘ Velocity of K^+ is greater than NO_3^-
2. ✘ Velocity of NO_3^- is greater than K^+
3. ✔ Velocity of K^+ approximately equal to NO_3^-
4. ✘ KNO_3 is highly soluble in water

Question Number : 89 Question Id : 77951813097 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A 2 kg water sample contains 408 mg of $CaSO_4$ (M.wt =136). The hardness in terms of $CaCO_3$ equivalents (in ppm) is

Options :

1. ✘ 100

2. ✘ 136

3. ✔ 150

4. ✘ 204

**Question Number : 90 Question Id : 77951813098 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Which of following is responsible for temporary hardness of water?

Options :

1. ✘ NaHCO_3

2. ✔ $\text{Ca}(\text{HCO}_3)_2$

3. ✘ NaHSO_4

4. ✘ CaCl_2

**Question Number : 91 Question Id : 77951813099 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Demineralised water can be obtained by using

Options :

1. ✘ Clark's method

2. ✘ Permutit method

3. ✘ Calgon's method

4. ✓ Ion exchange resin method

Question Number : 92 Question Id : 77951813100 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following is considered as high corrosive resistant material?

Options :

1. ✗ Cast iron

2. ✓ Stainless steel

3. ✗ Zinc

4. ✗ Mild steel

Question Number : 93 Question Id : 77951813101 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The wrong statement about corrosion is

Options :

1. ✗ Corrosion involves oxidation

2. ✗ Hydrated ferric oxide is called rust

3. ✓ Lesser the potential difference between the two metals, greater will be the corrosion of anodic metal

4. ✗ Coating of zinc on iron is an example of anodic coating

Question Number : 94 Question Id : 77951813102 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

An example for condensation polymer is

Options :

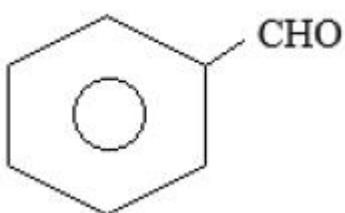
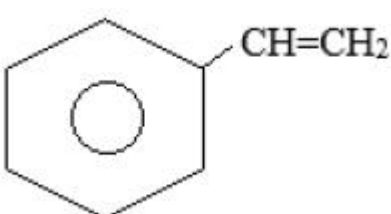
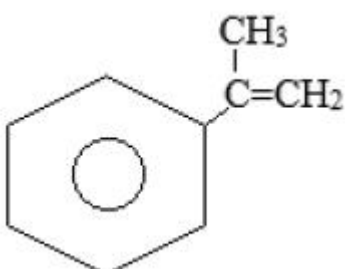
1. ✘ Neoprene rubber
2. ✘ Natural rubber
3. ✔ Urea - formaldehyde resin
4. ✘ Polytetrafluoroethylene

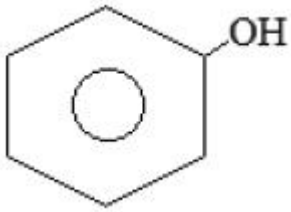
Question Number : 95 Question Id : 77951813103 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Buna-S is a polymer of monomers X and Y. If X is $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$, then what is Y?

Options :

1. ✘ 
2. ✔ 
3. ✘ 



4. ✘

Question Number : 96 Question Id : 77951813104 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following is an elastomer?

Options :

1. ✔ Neoprene

2. ✘ Polyvinyl chloride

3. ✘ Bakelite

4. ✘ Teflon

Question Number : 97 Question Id : 77951813105 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The monomer of Teflon is

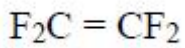
Options :

1. ✘ $F_2C = CF(Cl)$

2. ✘ $F_2C = CCl_2$

3. ✘ $F_2C = C(Br)Cl$

4. ✔



Question Number : 98 Question Id : 77951813106 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The major component of biogas is

Options :

1. ✓ CH_4

2. ✗ CO

3. ✗ N_2

4. ✗ NH_3

Question Number : 99 Question Id : 77951813107 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Ageing of skin, cataract and skin cancer are the result of

Options :

1. ✗ Acid rain

2. ✗ Green-house effect

3. ✓ Depletion of O_3 layer

4. ✗ CO Pollution

Question Number : 100 Question Id : 77951813108 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a green-house effect gas?

Options :

1. ✘ N_2O

2. ✘ CH_4

3. ✘ CO_2

4. ✔ N_2

Electronics and Communication Engineering

Section Id :	779518260
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	100
Number of Questions to be attempted :	100
Section Marks :	100
Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518276
Question Shuffling Allowed :	Yes

Question Number : 101 Question Id : 77951813109 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Conduction electrons have more mobility than holes because they

Options :

1. ✘ have more mass

2. ✘ experience collisions more frequently

3. ✘ have negative charge
4. ✔ need less energy to move them

Question Number : 102 Question Id : 77951813110 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The depletion region in a semiconductor p-n junction diode has

Options :

1. ✘ Electrons and holes
2. ✔ Positive and negative ions on either side
3. ✘ Neither electrons nor ions
4. ✘ No electrons

Question Number : 103 Question Id : 77951813111 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A junction FET can be used as a voltage variable resistor

Options :

1. ✘ At pinch-off condition
2. ✘ Beyond pinch-off region
3. ✔ Well below pinch-off condition
4. ✘ For any value of V_{DS}

Question Number : 104 Question Id : 77951813112 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Thermal runaway will take place if the quiescent point is such that

Options :

1. ✓ $V_{CE} > 1/2 V_{CC}$
2. ✗ $V_{CE} < V_{CC}$
3. ✗ $V_{CE} < 2 V_{CC}$
4. ✗ $V_{CE} < 1/2 V_{CC}$

Question Number : 105 Question Id : 77951813113 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A 1 msec pulse can be stretched to 1 sec pulse by using

Options :

1. ✗ An astablemultivibrator
2. ✓ A monostablemultivibrator
3. ✗ A bistablemultivibrator
4. ✗ A Schmitt trigger circuit

Question Number : 106 Question Id : 77951813114 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The voltage gain of an amplifier without feedback and with negative feedback respectively are 100 and 20. The percentage of negative feedback (β) would be

Options :

1. ✓ 4%

2. ✘ 5%

3. ✘ 20%

4. ✘ 80%

Question Number : 107 Question Id : 77951813115 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

An RC amplifier stage has a bandwidth of 500 KHz what will be the rise time of this amplifier stage

Options :

1. ✘ $0.35 \mu s$

2. ✔ $0.7 \mu s$

3. ✘ $1.0 \mu s$

4. ✘ $2.0 \mu s$

Question Number : 108 Question Id : 77951813116 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A CE amplifier has $R_L = 10 \text{ K}\Omega$. Given $h_{ie} = 1 \text{ K}\Omega$, $h_{fe} = 50$, $h_{re} = 0$ and $1/h_{oe} = 40 \text{ K}\Omega$, what is the voltage gain.

Options :

1. ✘ -500

2. ✔ -400

3. ✘ -50

4. ✘ -40

Question Number : 109 Question Id : 77951813117 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

What is the main advantage of JFET amplifier?

Options :

1. ✘ High Voltage gain
2. ✘ Low output impedance
3. ✘ Very low input capacitance
4. ✔ High input impedance

Question Number : 110 Question Id : 77951813118 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which type of amplifier has maximum efficiency

Options :

1. ✘ Class A
2. ✘ Class AB
3. ✘ Class B
4. ✔ Class C

Question Number : 111 Question Id : 77951813119 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The maximum efficiency of full wave rectification is

Options :

1. ✘ 40.6%
2. ✘ 100%
3. ✔ 81.2%
4. ✘ 85.6%

Question Number : 112 Question Id : 77951813120 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

What would be the value of feedback voltage in a negative feedback amplifier with $A=100$; $\beta=0.03$ and input signal voltage = 40mV

Options :

1. ✔ 0.03V
2. ✘ 0.06V
3. ✘ 0.09V
4. ✘ 0.12V

Question Number : 113 Question Id : 77951813121 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following Oscillator is the most stable oscillator ?

Options :

1. ✔ Crystal controlled

2. ✘ Weinbridge

3. ✘ Colpitts

4. ✘ Hartley

Question Number : 114 Question Id : 77951813122 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

An ideal op-amp has

Options :

1. ✘ Infinite output impedance

2. ✔ Zero output impedance

3. ✘ Low voltage gain

4. ✘ Zero input impedance

Question Number : 115 Question Id : 77951813123 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a bistablemultivibrator circuit, commutating capacitor is used

Options :

1. ✘ to provide ac coupling

2. ✘ to reduce gain

3. ✘ to increasebase storage charge

4. ✔ to increase the speed of response

Question Number : 116 Question Id : 77951813124 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

When a network has 10 nodes and 17 branches in all then the number of node pair voltages would be

Options :

1. ✘ 7

2. ✘ 9

3. ✘ 10

4. ✔ 45

Question Number : 117 Question Id : 77951813125 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A resistance of 5 ohms is further drawn so that its length becomes double. Its resistance will now is

Options :

1. ✘ 5 ohms

2. ✘ 7.5 ohms

3. ✘ 10 ohms

4. ✔ 20 ohms

Question Number : 118 Question Id : 77951813126 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The impedance of an inductive reactance varies

Options :

1. ✓ linearly with frequency
2. ✗ parabolically with frequency
3. ✗ exponentially with frequency
4. ✗ linearly with frequency in an decreasing manner

Question Number : 119 Question Id : 77951813127 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A series RLC circuit resonates at 3 MHz and has 3dB bandwidth of 10 KHz. The Q of the circuit at resonance

Options :

1. ✗ 30
2. ✗ $\frac{300}{\sqrt{2}}$
3. ✓ 300
4. ✗ $300\sqrt{2}$

Question Number : 120 Question Id : 77951813128 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A coil of resistance of $5\ \Omega$ and inductance 0.4H is connected to a 50 V D.C. supply.

The energy stored in the field is

Options :

1. ✗ 10 J
2. ✓ 20 J

3. ✘ 40 J

4. ✘ 80 J

**Question Number : 121 Question Id : 77951813129 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

When VSWR is 3, the magnitude of the reflection coefficient will be

Options :

1. ✘ $1/4$

2. ✘ $1/3$

3. ✔ $1/2$

4. ✘ 1

**Question Number : 122 Question Id : 77951813130 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

In a parallel RLC circuit at resonance, the current drawn from source is

Options :

1. ✔ Minimum

2. ✘ Maximum

3. ✘ Zero

4. ✘ Equal to branch currents

Question Number : 123 Question Id : 77951813131 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

What is the inverse Laplace transform of e^{-as}/s ?

Options :

1. ✘ e^{-at}
2. ✔ $u(t-a)$
3. ✘ $\delta(t-a)$
4. ✘ $(t-a)u(t-a)$

Question Number : 124 Question Id : 77951813132 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following theorems can be applied to any network-linear or non-linear, active or passive, time-variant or time-invariant?

Options :

1. ✘ Thevenin theorem
2. ✘ Norton theorem
3. ✔ Tellegen theorem
4. ✘ Superposition theorem

Question Number : 125 Question Id : 77951813133 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A Series RLC circuit has $R = 2 \Omega$, $L = 1 \text{ mH}$ and $C = 0.4 \mu\text{F}$. Its Q factor is

Options :

1. ✘ 5
2. ✘ 50
3. ✔ 25
4. ✘ 100

Question Number : 126 Question Id : 77951813134 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A transmission line having 50Ω impedance is terminated with a load of $(40 + j30) \Omega$. The VSWR is

Options :

1. ✘ $1/3$
2. ✘ $0.8 + j 0.6$
3. ✘ 1
4. ✔ 2

Question Number : 127 Question Id : 77951813135 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Characteristic impedance Z_0 for a lossless line is

Options :

1. ✘ $\frac{1}{\sqrt{LC}}$
2. ✘ $\sqrt{\frac{C}{L}}$

3. ✘ \sqrt{LC}

4. ✔ $\sqrt{\frac{L}{C}}$

Question Number : 128 Question Id : 77951813136 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In an ideal transmission line with matched load, the VSWR and reflection coefficient are respectively

Options :

1. ✘ 1 and 1

2. ✘ 0 and 1

3. ✘ infinity and 0

4. ✔ 1 and 0

Question Number : 129 Question Id : 77951813137 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If three resistors of each $16\ \Omega$ are connected in parallel then the equivalent resistance is

Options :

1. ✘ $48\ \Omega$

2. ✔ $5.33\ \Omega$

3. ✘ $24\ \Omega$

4. ✘ $5\ \Omega$

Question Number : 130 Question Id : 77951813138 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The shape of time base signal for CRO is

Options :

1. ✘ Sine wave
2. ✘ Square wave
3. ✘ Rectangular wave
4. ✔ Saw tooth wave

Question Number : 131 Question Id : 77951813139 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Range of ammeter is extended by

Options :

1. ✘ by connecting resistor in series with ammeter
2. ✘ by increasing applied voltage
3. ✔ by connecting resistor in shunt with ammeter
4. ✘ by using step-up transformer

Question Number : 132 Question Id : 77951813140 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

To minimize loading effect of circuit under test, the input impedance of device must

Options :

1. ✔ be very high

2. ✘ be capacitive
3. ✘ be very low
4. ✘ match with input impedance of circuit

Question Number : 133 Question Id : 77951813141 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The internal resistance of an ideal ammeter is

Options :

1. ✔ Zero
2. ✘ Very low
3. ✘ Very high
4. ✘ Infinite

Question Number : 134 Question Id : 77951813142 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

What is the main function of a microphone?

Options :

1. ✘ Amplify signals
2. ✘ Convert electrical signals to sound
3. ✔ Convert sound to electrical signals

4. ✘ Play background music

Question Number : 135 Question Id : 77951813143 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Sound power level is expressed in

Options :

1. ✘ Hertz

2. ✘ Radians

3. ✘ Phon

4. ✔ Decibels

Question Number : 136 Question Id : 77951813144 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a common name for a signal generator?

Options :

1. ✘ Test signal generator

2. ✘ Tone generator

3. ✔ Oscilloscope

4. ✘ Function generator

Question Number : 137 Question Id : 77951813145 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a standard function generator, what determines the frequency of the output signal

Options :

1. ✘ amplitude setting
2. ✔ resistance-capacitance (RC) network
3. ✘ duty cycle
4. ✘ output impedance

Question Number : 138 Question Id : 77951813146 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a digital voltmeter (DVM), the AC voltage is typically converted to DC using:

Options :

1. ✘ Oscillators
2. ✔ Rectifiers and filters
3. ✘ Resistors
4. ✘ Inductors

Question Number : 139 Question Id : 77951813147 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

What is the primary use of Lissajous figures on a CRO?

Options :

1. ✘ Measuring voltage
2. ✔

Measuring frequency and phase difference

3. ✘ Increasing brightness
4. ✘ Adjusting focus

**Question Number : 140 Question Id : 77951813148 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

To measure amplitude using a CRO, where is the input voltage applied

Options :

1. ✔ Vertical input
2. ✘ Horizontal input
3. ✘ Time base generator
4. ✘ Intensity control

**Question Number : 141 Question Id : 77951813149 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

SMPS is used for

Options :

1. ✘ obtaining controlled ac power supply
2. ✔ obtaining controlled dc power supply
3. ✘ storage of dc power
4. ✘ switch from one source to another

Question Number : 142 Question Id : 77951813150 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is used to turn off an SCR?

Options :

1. ✘ Gate current
2. ✔ Reducing anode voltage below holding current
3. ✘ Increasing anode voltage
4. ✘ Reducing gate voltage

Question Number : 143 Question Id : 77951813151 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

LED is what type of device

Options :

1. ✔ P-N diode
2. ✘ Thermistor
3. ✘ Gate
4. ✘ Transistor

Question Number : 144 Question Id : 77951813152 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In photoconductive cell, the resistance of the semiconductor material varies with the intensity of incident light

Options :

1. ✘ directly
2. ✔ inversely
3. ✘ exponentially
4. ✘ logarithmically

**Question Number : 145 Question Id : 77951813153 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Which of the following represent active transducer?

Options :

1. ✘ Strain gauge
2. ✘ Thermistor
3. ✘ LVDT
4. ✔ Thermocouple

**Question Number : 146 Question Id : 77951813154 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Which of the following can be measured using Piezo-electric transducer?

Options :

1. ✘ Low frequency

2. ✘ Static Displacement

3. ✔ Dynamic Force

4. ✘ DC Temperature

Question Number : 147 Question Id : 77951813155 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The closed-loop transfer function of a unity feedback control system is $\frac{25}{s^2+10s+25}$.

What is the open loop transfer function of the system?

Options :

1. ✔ $\frac{25}{s^2+10s}$

2. ✘ $\frac{25}{s^2+25}$

3. ✘ $\frac{25}{s+25}$

4. ✘ $\frac{25}{s+10}$

Question Number : 148 Question Id : 77951813156 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A unity feedback system has open loop transfer function $G(s) = \frac{16}{s(s+1.6)}$. The natural

frequency of the system in rad/sec is

Options :

1. ✘ 16

2. ✘ 8

3. ✘ 2

4. ✔ 4

**Question Number : 149 Question Id : 77951813157 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The phenomenon of injection electro luminescence is the basis of working of

Options :

1. ✘ Photodiodes

2. ✔ Light Emitting Diodes

3. ✘ Phototransistors

4. ✘ Solar cells

**Question Number : 150 Question Id : 77951813158 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Which photodetector provides internal gain?

Options :

1. ✘ PN Photodiode

2. ✘ PIN Photodiode

3. ✔ Avalanche Photodiode

4. ✘ Solar Cell

Question Number : 151 Question Id : 77951813159 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A broadcast radio transmitter radiates 20 KW when the modulation percentage is 60.

The carrier power will be

Options :

1. ✘ 1.2 KW
2. ✘ 1.45 KW
3. ✔ 16.94 KW
4. ✘ 20 KW

Question Number : 152 Question Id : 77951813160 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Spectral density of white noise

Options :

1. ✘ varies with frequency
2. ✔ is constant
3. ✘ varies with bandwidth
4. ✘ varies with phase

Question Number : 153 Question Id : 77951813161 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which type of demodulator is used to recover SSB signals?

Options :

1. ✘

Envelope detector

2. ✘ Phase discriminator

3. ✔ Product detector

4. ✘ Slope detector

**Question Number : 154 Question Id : 77951813162 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

For F₁ layer the maximum density is 2.3×10^6 electron per c.c. The critical frequency for that layer will be

Options :

1. ✘ 1.36 MHz

2. ✔ 13.6 MHz

3. ✘ 136 MHz

4. ✘ 1360 MHz

**Question Number : 155 Question Id : 77951813163 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

A 1000 KHz carrier is simultaneously modulated with 300 Hz and 2 KHz audio sine waves. Which of the following frequencies will not be present in the output

Options :

1. ✔ 700 KHz

2. ✘ 998 KHz

3. ✘ 999.7 KHz

4. ✘ 1000.3 KHz

**Question Number : 156 Question Id : 77951813164 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The SSB can be obtained from balanced modulator by connecting at its output a

Options :

1. ✔ filter

2. ✘ adder

3. ✘ buffer

4. ✘ clipper

**Question Number : 157 Question Id : 77951813165 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The function of a pre-emphasis circuit in a communication system is to boost

Options :

1. ✘ the amplitude of modulated signal

2. ✔ the higher audio frequencies

3. ✘ the lower audio frequencies

4. ✘ the whole audio band

Question Number : 158 Question Id : 77951813166 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a commercial FM broadcasting the maximum frequency deviation is

Options :

1. ✘ 15 KHz
2. ✘ 20 KHz
3. ✘ 200 KHz
4. ✔ 75 KHz

Question Number : 159 Question Id : 77951813167 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A super heterodyne receiver with an IF of 450 KHz is tuned to a signal at 1200 KHz.

The image frequency is

Options :

1. ✘ 900 KHz
2. ✘ 1800 KHz
3. ✔ 2100 KHz
4. ✘ 1550 KHz

Question Number : 160 Question Id : 77951813168 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which one is not digital modulation technique?

Options :

1. ✘ Amplitude Shift Keying

2. ✓ Pulse width modulation
3. ✘ Frequency Shift Keying
4. ✘ QAM

Question Number : 161 Question Id : 77951813169 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a communication system, the probabilities of message occurrences are $1/8$, $3/8$, $1/8$ and $3/8$. The source entropy will be

Options :

1. ✓ 1.8 bits/message
2. ✘ 2.8 bits/message
3. ✘ 3.4 bits/message
4. ✘ 5.6 bits/message

Question Number : 162 Question Id : 77951813170 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The process of converting the analog sample into discrete form is called

Options :

1. ✘ Modulation
2. ✘ Multiplexing
3. ✓ Quantization

4. ✘ Sampling

Question Number : 163 Question Id : 77951813171 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The sequence of operations to obtain PCM is

Options :

1. ✔ sampling, quantizing, encoding

2. ✘ quantizing, encoding, sampling

3. ✘ quantizing, sampling, encoding

4. ✘ Sampling only

Question Number : 164 Question Id : 77951813172 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In digital transmission, the modulation technique that requires minimum bandwidth is

Options :

1. ✔ Delta modulation

2. ✘ PCM

3. ✘ DPCM

4. ✘ PAM

Question Number : 165 Question Id : 77951813173 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

QPSK is a modulation scheme where each symbol consists of

Options :

1. ✘ 4 bits
2. ✔ 2 bits
3. ✘ 1 bits
4. ✘ m number of bits, depending upon the requirement

Question Number : 166 Question Id : 77951813174 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

For global communication the number of satellites needed is

Options :

1. ✘ 1
2. ✘ 2
3. ✔ 3
4. ✘ 5

Question Number : 167 Question Id : 77951813175 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A satellite earth station has

Options :

1. ✘ only transmitting equipment
2. ✘ only receiving equipment

3. ✓ both transmitting as well as receiving equipment
4. ✗ neither transmitting nor receiving equipment

**Question Number : 168 Question Id : 77951813176 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Strapping is used in cavity magnetron to

Options :

1. ✗ prevent bunching
2. ✗ prevent cathode back heating
3. ✗ improve the phase focussing effect
4. ✓ prevent mode jumping

**Question Number : 169 Question Id : 77951813177 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

The distance of a geostationary satellite from the surface of the earth is nearly

Options :

1. ✗ 360 km
2. ✗ 3600 km
3. ✓ 36,000 km
4. ✗ 3,60,0000 km

Question Number : 170 Question Id : 77951813178 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In end fire array the main lobe direction of the radiation

Options :

1. ✘ is perpendicular to the array axis
2. ✘ is perpendicular to the array axis and also to the plane containing the array elements
3. ✔ coincides with the direction of the array axis
4. ✘ is 45° to the direction of array axis

Question Number : 171 Question Id : 77951813179 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The channel capacity C of a band limited Gaussian channel equals

Options :

1. ✔ $B \log_2(1 + S/N)$
2. ✘ $B \log(S/N)$
3. ✘ $\frac{1}{B} \log_2(S/N)$
4. ✘ $\frac{1}{B} \log_2(1+S/N)$

Question Number : 172 Question Id : 77951813180 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Electromagnetic transmission in rectangular wave guide uses

Options :

1. ✓ TE₁₀ mode
2. ✗ TEM mode
3. ✗ TE₂₀ mode
4. ✗ TE₁₁

Question Number : 173 Question Id : 77951813181 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The standard reference antenna for the directive gain is the

Options :

1. ✗ halfwave dipole
2. ✓ isotropic antenna
3. ✗ infinitesimal dipole
4. ✗ elementary doublet

Question Number : 174 Question Id : 77951813182 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The biggest disadvantage of CW Doppler radar is that

Options :

1. ✗ it does not give the target velocity
2. ✗

it does not give the target position

3. ✘ a transponder is required at the target

4. ✔ it does not give the target range

Question Number : 175 Question Id : 77951813183 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The COHO in MTI radar operates at the

Options :

1. ✔ intermediate frequency

2. ✘ transmitted frequency

3. ✘ receive frequency

4. ✘ pulse repetition frequency

Question Number : 176 Question Id : 77951813184 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

In a signed magnitude representation, the binary equivalent of 22.5625 is

Options :

1. ✘ 010110.1011

2. ✔ 010110.1001

3. ✘ 110101.1001

4. ✘

110110.1001

**Question Number : 177 Question Id : 77951813185 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Which one of the following can be used as parallel to series converter?

Options :

1. ✘ Decoder
2. ✘ Digital Counter
3. ✔ Multiplexer
4. ✘ De multiplexer

**Question Number : 178 Question Id : 77951813186 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

$Y = f(A, B) = \pi_M(0, 1, 2, 3)$ represents

Options :

1. ✘ NOR gate
2. ✘ NAND gate
3. ✘ OR gate
4. ✔ A situation where output is independent of input

**Question Number : 179 Question Id : 77951813187 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Minimum number of J-K flip flops needed to construct a BCD counter is

Options :

1. ✘ 2
2. ✘ 3
3. ✔ 4
4. ✘ 5

Question Number : 180 Question Id : 77951813188 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which one of the following D/A converters has the resolution of approximately 0.4% of its full-scale range?

Options :

1. ✔ 8- bit
2. ✘ 10- bit
3. ✘ 12- bit
4. ✘ 16- bit

Question Number : 181 Question Id : 77951813189 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The product of which of the following gives the figure of merit of a logic family?

Options :

1. ✘ Gain and bandwidth

2. ✓ Propagation delay time and power dissipation

3. ✗ Fan out and Propagation delay time

4. ✗ Noise margin and power dissipation

Question Number : 182 Question Id : 77951813190 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which one of the following difference equations will satisfy the JK flip-flop Truth table?

Options :

1. ✓ $Q_{n+1} = J_n \bar{Q}_n + \bar{K}_n Q_n$

2. ✗ $Q_{n+1} = \bar{J}_n \bar{Q}_n + \bar{K}_n Q_n$

3. ✗ $Q_{n+1} = J_n Q_n + K_n Q_n$

4. ✗ $Q_{n+1} = \bar{J}_n \bar{Q}_n + \bar{K}_n \bar{Q}_n$

Question Number : 183 Question Id : 77951813191 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which one of the following logic families is the fastest?

Options :

1. ✗ I²L

2. ✓ ECL

3. ✗ TTL

4. ✗ CMOS

Question Number : 184 Question Id : 77951813192 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which one of the following memories is volatile?

Options :

1. ✘ ROM
2. ✘ EPROM
3. ✔ Static RAM
4. ✘ Hard disk

Question Number : 185 Question Id : 77951813193 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

A 10-bit A/D converter is used to digitize an analog signal in the 0 to 5 V range. What is the maximum peak to peak ripple voltage (approximately) that can be allowed in the dc supply voltage?

Options :

1. ✘ 200 mV
2. ✘ 20 mV
3. ✘ 25 mV
4. ✔ 5 mV

Question Number : 186 Question Id : 77951813194 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

8051 series has how many 16 bit registers?

Options :

1. ✓ 2
2. ✗ 3
3. ✗ 1
4. ✗ 0

Question Number : 187 Question Id : 77951813195 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. ✗ PSW
2. ✗ SP
3. ✓ PC
4. ✗ R6

Question Number : 188 Question Id : 77951813196 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

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

Options :

1. ✓ PSW
2. ✗ SP

3. ✘ DPTR

4. ✘ PC

**Question Number : 189 Question Id : 77951813197 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

How are the status of the carry, auxiliary carry and parity flag affected if the write instruction MOV A, #9C

ADD A, #64H

Options :

1. ✘ CY=0, AC=0, P=0

2. ✔ CY=1, AC=1, P=0

3. ✘ CY=0, AC=1, P=0

4. ✘ CY=1, AC=0, P=1

**Question Number : 190 Question Id : 77951813198 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

How are the bits of the register PSW affected if we select Bank2 of 8051?

Options :

1. ✘ PSW.5=0 and PSW.4=1

2. ✘ PSW.2=0 and PSW.3=1

3. ✘ PSW.3=1 and PSW.4=1

4. ✔

PSW.3=0 and PSW.4=1

Question Number : 191 Question Id : 77951813199 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

On power up, the 8051 uses which RAM locations for register R0- R7?

Options :

1. ✘ 00-2F
2. ✔ 00-07
3. ✘ 00-7F
4. ✘ 00-0F

Question Number : 192 Question Id : 77951813200 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

How many bytes of bit addressable memory is present in 8051?

Options :

1. ✘ 8 bytes
2. ✘ 32 bytes
3. ✔ 16 bytes
4. ✘ 128 bytes

Question Number : 193 Question Id : 77951813201 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The 8051 microcontroller is of ___pin package as a _____ processor.

Options :

1. ✘ 30, 1byte
2. ✘ 20, 1 byte
3. ✔ 40, 8 bit
4. ✘ 40, 8 byte

Question Number : 194 Question Id : 77951813202 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is not a guided medium?

Options :

1. ✘ Twisted wire
2. ✘ Coaxial cable
3. ✘ Fiber-optic
4. ✔ Atmosphere

Question Number : 195 Question Id : 77951813203 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

IPV4 Address is

Options :

1. ✘ 8 bit
2. ✘ 16 bit

3. ✓ 32 bit

4. ✗ 64 bit

**Question Number : 196 Question Id : 77951813204 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

Router operates in which layer of OSI Reference Model?

Options :

1. ✗ Physical Layer

2. ✓ Network Layer

3. ✗ Transport Layer

4. ✗ Application Layer

**Question Number : 197 Question Id : 77951813205 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0**

What is a Firewall in Computer Network?

Options :

1. ✗ The physical boundary of Network

2. ✗ An operating System of Computer Network

3. ✓ A system designed to prevent unauthorized access

4. ✗ A web browsing Software

Question Number : 198 Question Id : 77951813206 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Bridge works in which layer of the OSI model

Options :

1. ✘ Application layer
2. ✘ Transport layer
3. ✘ Network layer
4. ✔ Datalink layer

Question Number : 199 Question Id : 77951813207 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following is not the Networking Device?

Options :

1. ✘ Gateways
2. ✔ Linux
3. ✘ Routers
4. ✘ Firewalls

Question Number : 200 Question Id : 77951813208 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Which of the following can be strictly Software?

Options :

1. ✘ Router

2. ✔ Firewall

3. ✘ Gateway

4. ✘ Modem