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 :	BSc Mathematics 23rd Apr 2026 Shift 1
Subject Name :	BSc Mathematics
Creation Date :	2026-04-23 15:16:21
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BSc Mathematics

Group Number :	1
Group Id :	77951854
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
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Break time :	0
Group Marks :	200

Mathematics

Section Id :	779518210
Section Number :	1
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 :	779518222
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 77951810607 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The integrating factor of $xcosx\frac{dy}{dx} + (xsinx + cosx)y = 1$ is _____

Options :

1. ✖ $x\ sinx$

2. ✖ $x\ cosx$

3. ✔ $x\ secx$

4. ✖ $x\ cosecx$

Question Number : 2 Question Id : 77951810608 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $y = y(x)$ is the solution of $\left(\frac{2+sinx}{y+1}\right)\frac{dy}{dx} + cosx = 0$ with $y(0) = 1$ then $y\left(\frac{\pi}{2}\right) =$____

Options :

1. ✔ $\frac{1}{3}$

2. ✖ $\frac{2}{3}$

3. ✖ 1

4. ✖

$\frac{4}{3}$

Question Number : 3 Question Id : 77951810609 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The solution of $y^4dx + 2xy^3dy = \frac{ydx-xdy}{x^3y^3}$ is_____

Options :

1. ✖ $xy^3 + 3log\left(\frac{y}{x}\right) = constant$

2. ✔ $x^3y^6 + 3log\left(\frac{y}{x}\right) = constant$

3. ✖ $x^3y^6 - 3log\left(\frac{y}{x}\right) = constant$

4. ✖ $x^6y^3 + 3log\left(\frac{y}{x}\right) = constant$

Question Number : 4 Question Id : 77951810610 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following is an integrating factor of $(x^2+y^2+2x)dx+2ydy = 0$?

Options :

1. ✔ e^x

2. ✖ x^2

3. ✖ $\frac{1}{x}$

4. ✖ x

Question Number : 5 Question Id : 77951810611 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The differential equation $\frac{dy}{dx} = \frac{-(x+x^8+py^2)}{y^8-y+qxy}$ is exact if _____

Options :

1. ✔ $2p = q$

2. ✖ $p = q$

3. ✖ $p \neq 2q$

4. ✖ $p = 1, q = 3$

Question Number : 6 Question Id : 77951810612 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The solution of $p = tan(px - y)$ is _____, where $p = \frac{dy}{dx}$

Options :

1. ✖ $y = tan^{-1}x + c$

2. ✖ $y = \frac{c}{x} + tan^{-1}c$

3. ✔ $y = cx - tan^{-1}c$

4. ✖ $xy = tan^{-1}c$

Question Number : 7 Question Id : 77951810613 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The general solution of $x^4p^2 = y + px,\ p = \frac{dy}{dx}$ is_____

Options :

1. ✖ $y = cx + c^2$

2. ✔ $xy = c^2x + c$

3. ✖ $x = c^2y + c$

4. ✖ $xy = c^2y + c$

Question Number : 8 Question Id : 77951810614 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The general solution of $xp^2 - 2yp + ax = 0$ is _____ where $p = \frac{dy}{dx}$.

Options :

1. ✖ $2x = cy + ac^2$

2. ✔ $2y = cx^2 + \frac{a}{c}$

3. ✖ $y = cx^2 + ac^2$

4. ✖ $y = cx^2 + \frac{a}{c}$

Question Number : 9 Question Id : 77951810615 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The general solution of $4xp^2 = (3x - a)^2, p = \frac{dy}{dx}$, is _____

Options :

1. ✔ $(y + c)^2 = x(x - a)^2$

2. ✖ $(x - a)^3 = y^2 + c$

3. ✖ $(y+c)^2=(x-a)^2$

4. ✖ $(y-c)^2=(x+a)^2$

Question Number : 10 Question Id : 77951810616 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The solution of $y=2px+4yp^2$ is _____

Options :

1. ✖ $y=cx-4c^2$

2. ✔ $y^2=cx+4c^2$

3. ✖ $y^2=\frac{c}{x}-\frac{c^2}{4}$

4. ✖ $y=cx-c^2$

Question Number : 11 Question Id : 77951810617 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Solution of $\frac{d^2y}{dx^2}+4\frac{dy}{dx}+29y=0, y(0)=0$

Options :

1. ✖ $y=ce^{-2x}cos5x$

2. ✖ $y=ce^{-2x}sin2x$

3. ✔ $y=ce^{-2x}sin5x$

4. ✖ $y=ce^{2x}cos5x$

Question Number : 12 Question Id : 77951810618 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Particular solution of $y'' + y = cosx$ is _____

Options :

1. ✔ $\frac{x}{2}sinx$

2. ✖ $\frac{1}{2}sinx$

3. ✖ $sinx$

4. ✖ $x\,cosx$

Question Number : 13 Question Id : 77951810619 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$\frac{1}{D^3-3D^2+4}e^{2x} =$ _____

Options :

1. ✖ $\frac{e^{2x}}{6}$

2. ✖ xe^{2x}

3. ✔ $\frac{x^2e^{2x}}{6}$

4. ✖ $\frac{xe^{-2x}}{6}$

Question Number : 14 Question Id : 77951810620 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The differential equation corresponding to the general solution $y = c_{1+}(c_2x + c_3)e^{2x}$ is

Options :

1. ✖ $\frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 4y = 0$

2. ✖ $\frac{d^3y}{dx^3} - 4\frac{d^2y}{dx^2} + 4\frac{dy}{dx} = e^{2x}$

3. ✔ $\frac{d^3y}{dx^3} - 4\frac{d^2y}{dx^2} + 4\frac{dy}{dx} = 0$

4. ✖ $\frac{d^2y}{dx^2} - 4\frac{dy}{dx} + 4y = e^{2x}$

Question Number : 15 Question Id : 77951810621 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Particular integral of $(D^2 + D)y = x^2 + 2x + 4$ is

Options :

1. ✖ $\frac{x^2}{3} + 4x$

2. ✖ $\frac{x^3}{3} + 4$

3. ✔ $\frac{x^3}{3} + 4x - 4$

4. ✖ $\frac{x^3}{3} + 4x^2$

Question Number : 16 Question Id : 77951810622 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Particular integral of $y'' + y = cosh3x$ is

Options :

1. ✔

$\frac{1}{10}cosh3x$

2. ✖ $\frac{-1}{10}sinh3x$

3. ✖ $3coshx$

4. ✖ $-3sinh3x$

Question Number : 17 Question Id : 77951810623 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The complimentary function of $y'' - 3y' + 2y = e^{3x}$ is _____

Options :

1. ✖ $y = c_1e^x + c_2e^{3x}$

2. ✖ $y = c_1e^{-x} + c_2e^{-3x}$

3. ✖ $y = c_1e^{-x} + c_2e^{-2x}$

4. ✔ $y = c_1e^{2x} + c_2e^x$

Question Number : 18 Question Id : 77951810624 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Particular integral of $\frac{1}{(D-2)^2}xe^{2x}$ =_____

Options :

1. ✔ $\frac{x^3}{6}e^{2x}$

2. ✖ x^3e^{2x}

3. ✖ $\frac{x^2}{2}e^{2x}$

4. ✖ $\frac{x^3}{12}e^{2x}$

Question Number : 19 Question Id : 77951810625 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$\frac{1}{D-a}X =$ _____

Options :

1. ✔ $e^{ax}\int Xe^{-ax}dx$

2. ✖ $e^{-ax}\int Xe^{ax}dx$

3. ✖ $e^{ax}\int \frac{X}{2}e^{ax}dx$

4. ✖ $\frac{1}{2}e^{ax}\int Xe^{-ax}dx$

Question Number : 20 Question Id : 77951810626 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Solution of $\frac{dx}{yz}=\frac{dy}{zx}=\frac{dz}{xy}$ is _____

Options :

1. ✖ $x^2+y^2=c_1,\ x^2-z^2=c_2$

2. ✔ $x^2-y^2=c_1,\ x^2-z^2=c_2$

3. ✖

$x^2 - y^2 = c_1,\ x^2 + z^2 = c_2$

4. ✖ $x^2 + y^2 = c_1,\ x^2 + z^2 = c_2$

Question Number : 21 Question Id : 77951810627 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The highest power of 3 contained in 100! is

Options :

1. ✖ 47

2. ✔ 48

3. ✖ 24

4. ✖ 40

Question Number : 22 Question Id : 77951810628 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

On the set of integers Z, the operation $*$ defined as following is not a binary operation.

Options :

1. ✖ $a * b = a + b + 1,\ \forall\ a, b \in Z$

2. ✔ $a * b = a^b\ \forall,\ a, b \in Z$

3. ✖ $a * b = a + b - ab,\ \forall\ a, b \in Z$

4. ✖ $a * b = lcm(a, b),\ \forall\ a, b \in Z$

Question Number : 23 Question Id : 77951810629 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In the group $(R-\{-1\},*)$, where $*$ is defined by $a*b=a+b+ab\ \forall\ a,b\in R-\{-1\}$, inverse of the element 2 is_____

Options :

1. ✖ $\frac{1}{2}$

2. ✔ $-\frac{2}{3}$

3. ✖ $-\frac{3}{2}$

4. ✖ $-\frac{1}{2}$

Question Number : 24 Question Id : 77951810630 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The intersection of the subgroups $2Z$, $3Z$ and $5Z$, i.e., $2Z\cap 3Z\cap 5Z$ of $(Z,+)$ is

Options :

1. ✖ $6Z$

2. ✖ $15Z$

3. ✖ $10Z$

4. ✔ $30Z$

Question Number : 25 Question Id : 77951810631 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The permutations $f = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ 4 & 8 & 2 & 5 & 1 & 3 & 7 & 6 \end{pmatrix}$, $g = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ 5 & 1 & 2 & 8 & 7 & 4 & 3 & 6 \end{pmatrix}$ of S_8 are respectively

Options :

1. ✖ even, even

2. ✖ even, odd

3. ✔ odd, even

4. ✖ odd, odd

Question Number : 26 Question Id : 77951810632 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A noncyclic group among the following is

Options :

1. ✖ $(\{1, \omega, \omega^2\}, \cdot)$

2. ✖ $(Z_4, +_4)$

3. ✔ $(\{1,3,5,7\}, \times_8)$

4. ✖ $(Z, +)$

Question Number : 27 Question Id : 77951810633 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Consider the following statements:

A. Every finite cyclic group of order n is isomorphic to the group $(Z_n, +_n)$.

B. Every infinite cyclic group is isomorphic to the group $(Z, +)$.

Which of the following statement is TRUE?

Options :

1. ✔ both A and B are true

2. ✖ A is true, B is false

3. ✖ A is false, B is true

4. ✖ both A and B are false

Question Number : 28 Question Id : 77951810634 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let H be a subgroup of a group G, where $O(H) = m$ and $O(G) = n$. Then, for any $a \in G$, $O(aH) =$

Options :

1. ✔ m

2. ✖ n

3. ✖ mn

4. ✖ $m + n$

Question Number : 29 Question Id : 77951810635 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the WRONG statement_____

Options :

1. ✖ Every subgroup of an abelian group is normal

2. ✔ In a factor group $\frac{G}{H}$ the subgroup H is not normal

3. ✖ A subgroup of index 2 of a group is normal

4. ✖ A subgroup H of a group G such that $aH = Ha \; \forall \; a \in G$ is normal

Question Number : 30 Question Id : 77951810636 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Consider the group homomorphism $f:(Z,+) \rightarrow (G = \{i^n : n \in Z\}.,\cdot)$, defined by $f(n) = i^n, \; \forall n \in Z$. Then, $Kerf =$_____

Options :

1. ✖ $\{1\}$

2. ✖ $\{0\}$

3. ✖ Z

4. ✔ $4Z$

Question Number : 31 Question Id : 77951810637 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The velocity vector is given as $\overline{V} = 5xyi + 2y^2j + 3yz^2k$. The divergence of this vector at $(1,1,1)$ is_____

Options :

1. ✖ 9

2. ✖ 10

3. ✖ 14

4. ✔

Question Number : 32 Question Id : 77951810638 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\emptyset = 2x^3y^2z^4$ then $\nabla^2\emptyset =$_____

Options :

1. ✖ $12xy^2z^4 + 4x^2z^4 + 20x^3y^2z^3$

2. ✔ $12xy^2z^4 + 4x^3z^4 + 24x^3y^2z^2$

3. ✖ $2x^2y^2z + 4x^3z^4 + 24x^3y^2z^2$

4. ✖ $4xy^2z + 4x^2z^4 + 24x^3y^2z^2$

Question Number : 33 Question Id : 77951810639 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If f and F are scalar and vector functions respectively, then which of the following is Not Correct?

Options :

1. ✖ $\nabla.\nabla f = \nabla^2 f$

2. ✖ $\nabla.\nabla \times F = 0$

3. ✖ $\nabla \times \nabla f = 0$

4. ✔ $\nabla \times (\nabla \times F) = \nabla.(\nabla F)$

Question Number : 34 Question Id : 77951810640 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

For a vector $\overline{A}$, which of the following statement is NOT TRUE?

Options :

1. ✖ If $\nabla.\overline{A} = 0$ then $\overline{A}$ is called solenoidal

2. ✖ If $\nabla \times \overline{A} \neq 0$ then $\overline{A}$ is called rotational

3. ✖ If $\nabla \times \overline{A} = 0$ then $\overline{A}$ is called irrotational

4. ✔ If $\nabla.\overline{A} = 0$ then $\overline{A}$ is called irrotational

Question Number : 35 Question Id : 77951810641 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\overline{a}$ is constant vector then $\nabla \times (\overline{a} \times \overline{r}) =$_____?

Options :

1. ✖ $\overline{a}$

2. ✔ $2\overline{a}$

3. ✖ $3\overline{a}$

4. ✖ $\overline{0}$

Question Number : 36 Question Id : 77951810642 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Find the directional derivative of $f = xyz$ at the point $(1,-1,-2)$ in the direction of the vector 2i-2j+k is_____

Options :

1. ✖ 0

2. ✔ $\frac{7}{3}$

3. ✖ $\frac{2}{3}$

4. ✖ 1

Question Number : 37 Question Id : 77951810643 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The vector field $\vec{V} = e^x \, siny \, i + e^x cosy \, j$ is _____

Options :

1. ✖ Solenoidal but not Irrotational

2. ✖ Irrotational but not Solenoidal

3. ✔ Both Solenoidal and Irrotational

4. ✖ neither Solenoidal nor Irrotational

Question Number : 38 Question Id : 77951810644 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\overline{a}$ and $\overline{b}$ are constant vectors and $\overline{r} = xi + yj + zk$, then $\nabla(\overline{r} \cdot (\overline{a} \times \overline{b})) =$_____

Options :

1. ✖ $\overline{a} \cdot \overline{b}$

2. ✔ $\overline{a} \times \overline{b}$

3. ✖ $\overline{b} \times \overline{a}$

4. ✖ 0

Question Number : 39 Question Id : 77951810645 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The velocity field on an incompressible flow is given by

$\overline{v} = (a_1x + a_2y + a_3z)i + (b_1x + b_2y + b_3z)j + (c_1x + c_2y + c_3z)k,$

where $a_1 = 2, c_3 = -4$ then the value of b_2 =__

Options :

1. ✖ 0

2. ✖ -2

3. ✔ 2

4. ✖ 6

Question Number : 40 Question Id : 77951810646 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\overline{r} = xi + yj + zk$ and $r = |\overline{r}| \neq 0$ then $div.(r^4\overline{r})$ =_____

Options :

1. ✖ $3r^4$

2. ✖ $5r^4$

3. ✖ $6r^4$

4. ✔ $7r^4$

Question Number : 41 Question Id : 77951810647 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $F = (3xy)\,i + (2y^2)\,j$. The value of the line integral $\int_C F \cdot dr =$ _____, where C is the arc of the parabola $y = 2x^2$ from $(0,0)$ *to* $(1,2)$.

Options :

1. ✖ $\frac{16}{3}$

2. ✔ $\frac{41}{6}$

3. ✖ 8

4. ✖ $\frac{28}{3}$

Question Number : 42 Question Id : 77951810648 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let$F = (2xy + z^3)\,i + x^2\,j + 3xz^2\,k$. The work done in moving a particle in this field from $(1,-2,1)$ to $(3,1,4)$ is_____

Options :

1. ✖ 72

2. ✖ 75

3. ✔ 202

4. ✖ 81

Question Number : 43 Question Id : 77951810649 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $F = ax\,i + by\,j + cz\,k$, where a, b, c are constants and S be the surface of the unit sphere, then the surface integral $\iint_S F \cdot n dS =$_____

Options :

1. ✔ $4\pi/3(a+b+c)$

2. ✖ $4\pi(a+b+c)$

3. ✖ $2\pi/3(a+b+c)$

4. ✖ $\pi(a+b+c)$

Question Number : 44 Question Id : 77951810650 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If C is the rectangle bounded by the lines x=0, x=a, y=0, y=b then the value of $\int_C (x^2+y^2)\,dx - 2xy\,dy$ is _____

Options :

1. ✖ $2ab^2$

2. ✔ $-2ab^2$

3. ✖ ab^2

4. ✖ $-ab^2$

Question Number : 45 Question Id : 77951810651 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the surface $mx^2 - 2nyz = (m+4)x$ is orthogonal to the surface $4x^2y + z^3 = 4$ at the point (1, -1, 2), then the values m and n will be_____

Options :

1. ✖ $m = 2, n = 1$

2. ✖ $m = 4, n = 2$

3. ✔ $m = 6, n = 3$

4. ✖ $m = 8, n = 4$

Question Number : 46 Question Id : 77951810652 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $u = x + y + z, v = x^2 + y^2 + z^2, w = yz + zx + xy$. Then the vectors ∇u, ∇v, ∇w are_____

Options :

1. ✖ Mutually perpendicular

2. ✖ Linearly independent

3. ✔ Coplanar

4. ✖ Collinear

Question Number : 47 Question Id : 77951810653 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\bar{r}$ is the position vector of any point on a closed surface S that encloses the volume V then $\iint_s (\bar{r}.ds)$ is equal to _____

Options :

1. ✖ $\frac{1}{2}V$

2. ✖ V

3. ✖ $2V$

4. ✔ $3V$

Question Number : 48 Question Id : 77951810654 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\bar{r}(t) = ti - t^2j + (t-1)k$ and $\bar{s}(t) = 2t^2i + 6tk$, then the value of $\int_0^2 \bar{r}.\bar{s}\, dt$ is

Options :

1. ✖ 4

2. ✖ 6

3. ✖ 8

4. ✔ 12

Question Number : 49 Question Id : 77951810655 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\bar{F} = (2x^2 - 3z)\, i - 2xy\, j - 4xk$, then $\int_V \nabla.\bar{F}\, dV =$_____, where V is the closed region bounded by $x = 0, y = 0, z = 0$ and $2x + 2y + z = 4$.

Options :

1. ✖ 0

2. ✖ $\frac{2}{3}$

3. ✖ $\frac{4}{3}$

4. ✔ $\frac{8}{3}$

Question Number : 50 Question Id : 77951810656 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Gauss divergence theorem states the relation between_____

Options :

1. ✔ surface integral and volume integral

2. ✖ a line integral and a surface integral

3. ✖ line integral and a volume integral

4. ✖ gradient of a function and its surface integral

Question Number : 51 Question Id : 77951810657 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The radius of the sphere $x^2 + y^2 + z^2 + 2x - 4y + 6z + 1 = 0$ is _____

Options :

1. ✔ $\sqrt{13}$

2. ✖ 3

3. ✖ 4

4. ✖ $\sqrt{21}$

Question Number : 52 Question Id : 77951810658 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the plane $lx + my + nz = p$ touches the sphere $x^2 + y^2 + z^2 = a^2$ then _____

Options :

1. ✖ $p = a$

2. ✔ $p^2 = a^2(l^2 + m^2 + n^2)$

3. ✖ $l^2 + m^2 + n^2 = a^2$

4. ✖ $p = a^2$

Question Number : 53 Question Id : 77951810659 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The angle between the tangent plane to the sphere $x^2 + y^2 + z^2 = 9$ at the point $(2,1,2)$ and the XY – plane is _____

Options :

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

2. ✖ $cos^{-1}\left(\frac{3}{\sqrt{5}}\right)$

3. ✖ $cos^{-1}\left(\frac{4}{9}\right)$

4. ✖ $cos^{-1}\left(\frac{\sqrt{2}}{3}\right)$

Question Number : 54 Question Id : 77951810660 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

The distance between the point $(1,2,3)$ and the sphere $x^2 + y^2 + z^2 = 9$ is _____

Options :

1. ✖ 0

2. ✖ $3 + \sqrt{14}$

3. ✔ $\sqrt{14} - 3$

4. ✖ $3 - \sqrt{14}$

Question Number : 55 Question Id : 77951810661 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The plane XOZ divides the line joining of $(1,-1,5)$ and $(2,3,4)$ in the ratio λ: 1 then the value of λ =_____

Options :

1. ✖ 3

2. ✖ -3

3. ✔ $\frac{1}{3}$

4. ✖ $\frac{-1}{3}$

Question Number : 56 Question Id : 77951810662 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The equation of the plane passing through the midpoint of the line joining the points $(1,2,3)$ and $(3,4,5)$ and perpendicular to it is _____

Options :

1. ✔ $x + y + z = 9$

2. ✖ $x + y + z + 9 = 0$

3. ✖ $2x + 3y + 4z = 9$

4. ✖ $2x + 3y + 4z + 9 = 0$

Question Number : 57 Question Id : 77951810663 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Consider the planes:

$P_1: 3x + 15y + 21z = 9$

$P_2: x - 3y - z = 5$

$P_3: 2x + 10y + 14z = 5.$

Which of the following is TRUE?

Options :

1. ✖ P_1 and P_2 are parallel

2. ✔ P_1 and P_3 are parallel

3. ✖ P_2 and P_3 are parallel

4. ✖ P_1, P_2, P_3 are all parallel

Question Number : 58 Question Id : 77951810664 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The direction ratios of the line $x - y + z - 5 = 0 = x - 3y - 6$ are _____

Options :

1. ✖

$2, -4, 1$

2. ✖ $\frac{2}{\sqrt{21}}, \frac{-4}{\sqrt{21}}, \frac{1}{\sqrt{21}}$

3. ✖ $3,1,2$

4. ✔ $\frac{3}{\sqrt{14}}, \frac{1}{\sqrt{14}}, \frac{-2}{\sqrt{14}}$

Question Number : 59 Question Id : 77951810665 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the line $\frac{x-2}{3} = \frac{y+1}{2} = \frac{z-1}{-1}$ intersect the curve $xy = c^2$ in $XY - plane$ than c=

Options :

1. ✖ ± 1

2. ✖ ± 3

3. ✔ $\pm\sqrt{5}$

4. ✖ $\pm\sqrt{3}$

Question Number : 60 Question Id : 77951810666 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Radius of the circle $x^2 + y^2 + z^2 = 169, x - 2y + 2z = 15$ is___

Options :

1. ✖ 4

2. ✔ 12

3. ✖ 13

4. ✖ 6

Question Number : 61 Question Id : 77951810667 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A non-empty sub-set of real numbers which is bounded below has _____

Options :

1. ✔ infimum

2. ✖ Supremum

3. ✖ both infimum and supremum of A

4. ✖ neither infimum nor supremum

Question Number : 62 Question Id : 77951810668 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The least upper bound of the set $\left\{\frac{3n+2}{2n+1}/n \in N\right\}$ is _____ , N is set of natural numbers.

Options :

1. ✖ $\frac{3}{2}$

2. ✖ $\frac{5}{2}$

3. ✔ $\frac{5}{3}$

4. ✖

$\frac{2}{3}$

Question Number : 63 Question Id : 77951810669 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following is a convergent series?

Options :

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

2. ✖ $\sum_{n=1}^{\infty} a_n$, where $a_n = 2, \forall n \in N$

3. ✖ $\sum_{n=1}^{\infty} \frac{1}{n^{3/4}}$

4. ✖ $\sum_{n=1}^{\infty} 3^n$

Question Number : 64 Question Id : 77951810670 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The function $f(x) = (2)^{\frac{1}{x}}$ is not continuous at_____

Options :

1. ✔ $x = 0$

2. ✖ $x = 1$

3. ✖ $x = -1$

4. ✖ $x = 2$

Question Number : 65 Question Id : 77951810671 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $f(x) = x^3 sin\frac{1}{x}$ for $x \neq 0$ and $f(0) = 0$ then $f(x)$ is____

Options :

1. ✔ Discontinuous at $x \neq 0$

2. ✖ Continuous for all values of x

3. ✖ Discontinuous at $x = 0$

4. ✖ Discontinuous for all values of x

Question Number : 66 Question Id : 77951810672 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

$\lim_{x\to 0} \frac{e^{\frac{1}{x}}}{e^{\frac{1}{x}}+1} =$ _____

Options :

1. ✖ 0

2. ✔ 1

3. ✖ ∞

4. ✖ does not exist

Question Number : 67 Question Id : 77951810673 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

If $f(x+y) = f(x) + f(y) + x^2 + yx^2, \forall\, x, y \in R$, and $\lim_{x\to 0} \frac{f(x)}{x} = 1$, Then $f'(3)$ is equal to____

Options :

1. ✖ 0

2. ✖ 1

3. ✖ ∞

4. ✔ 10

Question Number : 68 Question Id : 77951810674 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $f(x) = \begin{cases} x^P \cos\frac{1}{x}, & x \neq 0 \\ 0, & x = 0 \end{cases}$. Then $f(x)$ is differentiable at $x = 0$ if _____

Options :

1. ✖ $P > 0$

2. ✖ $P = 0$

3. ✔ $P > 1$

4. ✖ $P < 1$

Question Number : 69 Question Id : 77951810675 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The function f is defined by $f(x) = \begin{cases} x^2 + 3x + a, & if\ x \leq 1 \\ bx + 2, & if\ x > 1 \end{cases}$, is derivable for every x.

Then the value of a is ____

Options :

1. ✔ 3

2. ✖ 5

3. ✖

-3

4. ✖ -6

Question Number : 70 Question Id : 77951810676 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The value of C of the Cauchy's mean value theorem for the function $f(x) = e^x$ *and* $g(x) = e^{-x}$ defined on $[a, b]$ is _____

Options :

1. ✖ ab

2. ✔ $\frac{a+b}{2}$

3. ✖ $a + b$

4. ✖ $a - b$

Question Number : 71 Question Id : 77951810677 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $f(x) = x, \forall\, x \in [0,3]$, and $P = \{0,1,2,3\}$ be a partition of $[0,3]$, then $L(P, f) =$____

Options :

1. ✔ 3

2. ✖ 6

3. ✖ -3

4. ✖ -6

Question Number : 72 Question Id : 77951810678 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the function $f(x)$ is bounded and integrable on $[a,b]$ such that $f(x) \geq 0, \forall x \in [a,b]$, $b \geq a$ then $\int_a^b f(x)dx$ is ___

Options :

1. ✖ ≤ 0

2. ✖ $= 0$

3. ✔ ≥ 0

4. ✖ $\neq 0$

Question Number : 73 Question Id : 77951810679 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

For a Riemann inerrability, the condition of continuity is ___

Options :

1. ✖ necessary

2. ✔ sufficient

3. ✖ not necessary

4. ✖ Insufficient

Question Number : 74 Question Id : 77951810680 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If f monotonic in $[a,b]$, then f is___

Options :

1. ✖ not bounded in $[a, b]$

2. ✖ not integrable in $[a, b]$

3. ✔ integrable in $[a, b]$

4. ✖ bounded in (a, b) only

Question Number : 75 Question Id : 77951810681 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Invertible elements in the ring of integers are _____

Options :

1. ✔ 1,–1

2. ✖ 2,–2

3. ✖ 3,–3

4. ✖ 4,–4

Question Number : 76 Question Id : 77951810682 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The ring of integers $(Z, +, \cdot)$ is _____

Options :

1. ✔ an integral domain

2. ✖ a field

3. ✖ a skew field

4. ✖ with zero divisors

Question Number : 77 Question Id : 77951810683 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The ring of all 2×2 matrices over reals is_____

Options :

1. ✖ an integral domain

2. ✖ a field

3. ✖ a skew field

4. ✔ non-commutative

Question Number : 78 Question Id : 77951810684 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let Z be the ring of integers and $f: Z \to 2Z$ defined by $f(n) = 2n,\ \forall\ n \in Z$. Then f is

Options :

1. ✖ a ring homomorphism

2. ✔ not a ring homomorphism

3. ✖ a zero homomorphism

4. ✖ identity homomorphism

Question Number : 79 Question Id : 77951810685 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $f(x) = 2 + 3x^2, g(x) = 1 + 2x^2$, be polynomials in the ring Z_4 under mod 4. Then, $\deg\{f(x)g(x)\} =$

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

Question Number : 80 Question Id : 77951810686 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following polynomial is irreducible over Z_3, a field modulo 3?

Options :

1. ✖ $x^2 + 2$

2. ✖ $2x + 1$

3. ✔ $x^2 + 1$

4. ✖ $x - 1$

Question Number : 81 Question Id : 77951810687 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $A = \begin{bmatrix} 1 & 1 & 1 \\ 2 & 2 & 3 \\ x & y & z \end{bmatrix}$ and let $V = \{(x, y, z) \in R^3 : \det(A) = 0\}$. Then the dimension of V equals _____

Options :

1. ✖ 0

2. ✖ 1

3. ✔ 2

4. ✖ 3

Question Number : 82 Question Id : 77951810688 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The coordinates of $(4,5,6)$ with respect to the basis set $e_1 = (1,1,1), e_2 = (-1,1,0), e_3 = (1,0,-1)$ are_____

Options :

1. ✖ $(1,1,6)$

2. ✖ $(2,1,3)$

3. ✔ $(5,0,-1)$

4. ✖ $(3,2,3)$

Question Number : 83 Question Id : 77951810689 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following sets of vectors in R^2 are linearly independent over R.

Options :

1. ✖ $\{(1,-1),(-1,1)\}$

2. ✔ $\{(-1,0),(-1,2)\}$

3. ✖ $\{(2,4),(-1,-2)\}$

4. ✖ $\{(1,-2),\left(-\frac{1}{2},1\right)\}$

Question Number : 84 Question Id : 77951810690 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $W=\left\{\begin{pmatrix} x & y \\ z & 0 \end{pmatrix}: x,y,z \in R\right\}$ is a subspace of the vector space M_2 of 2×2 matrices over the field of real numbers R, then $dimW =$_____

Options :

1. ✖ 1

2. ✖ 2

3. ✔ 3

4. ✖ 4

Question Number : 85 Question Id : 77951810691 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $T: R^3 \to R^2$ be a linear transformation defined by $T(a,b,c)=(a+b+c, a-b-c)$, then which of the following is an element in the null space of T.

Options :

1. ✖ $(1,-1,0)$

2. ✖ $(0,1,1)$

3. ✔ $(0,1,-1)$

4. ✖ $(1,1,1)$

Question Number : 86 Question Id : 77951810692 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let $T: R^3 \to R^3$ be a linear transformation defined by $T(a,b,c) = (a+b-c, a+b+c, b-c)$ Then the matrix of the linear transformation T with respect to the ordered basis $B = \{(0,1,0),(0,0,1),(1,0,0)\}$ of R^3 is _____

Options :

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

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

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

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

Question Number : 87 Question Id : 77951810693 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If T is a linear transformation from $R^2 \to R^2$ defined by $T(1,-1) = (2,-4)$ and $T(1,1) = (0,2)$. Then $T(a,b) =$_____

Options :

1. ✔ $(a-b, -a+3b)$

2. ✖

$(a+b, -a+3b)$

3. ✖ $(a-b, a+3b)$

4. ✖ $(a-b, -a-3b)$

Question Number : 88 Question Id : 77951810694 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

For what values of α and β the following simultaneous equations have an infinite number of solutions? $x+y+z=5, x+3y+3z=9$, and $x+2y+\alpha z=\beta$.

Options :

1. ✔ 2, 7

2. ✖ 3, 8

3. ✖ 8, 3

4. ✖ 7, 2

Question Number : 89 Question Id : 77951810695 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Solution for the system of equations $4y+3z=8, 2x-z=2$ and $3x+2y=5$ is____

Options :

1. ✖ $x=0, y=1, z=\frac{4}{3}$

2. ✖ $x=0, y=\frac{1}{2}, z=2$

3. ✖ $x=1, y=\frac{1}{2}, z=2$

4. ✔ non-existent

Question Number : 90 Question Id : 77951810696 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The equation $\begin{vmatrix} 2 & 1 & 1 \\ 1 & 1 & -1 \\ y & x^2 & x \end{vmatrix} = 0$, represents a parabola passing through the points

Options :

1. ✖ $(0,1), (0,2), (0,-1)$

2. ✔ $(0,0), (-1,1), (1,2)$

3. ✖ $(1,0), (0,0), (2,2)$

4. ✖ $(1,2), (2,1), (0,0)$

Question Number : 91 Question Id : 77951810697 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If A and B are square matrices of size $n \times n$, then which of the following statement is not true.

Options :

1. ✖ $det(AB) = \det(A)\det(B)$

2. ✖ $det(kA) = k^n \det(A)$

3. ✔ $det(A + B) = \det(A) + \det(B)$

4. ✖ $det(A^T) = \det(A)$

Question Number : 92 Question Id : 77951810698 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The determinant of a skew-symmetric matrix of odd order is ____

Options :

1. ✖ 1

2. ✖ 2

3. ✖ -1

4. ✔ 0

Question Number : 93 Question Id : 77951810699 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The characteristic equation associated with the matrix $\begin{bmatrix} 0 & 0 & 3 \\ 1 & 0 & 2 \\ 0 & 1 & 1 \end{bmatrix}$ is

Options :

1. ✔ $\lambda^3 - \lambda^2 - 2\lambda - 3 = 0$

2. ✖ $\lambda^3 - \lambda^2 + 2\lambda - 3 = 0$

3. ✖ $\lambda^3 - \lambda^2 - 3\lambda - 3 = 0$

4. ✖ $\lambda^3 - \lambda^2 + 3\lambda - 3 = 0$

Question Number : 94 Question Id : 77951810700 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The matrix $\begin{bmatrix} 1 & 4 \\ 3 & 2 \end{bmatrix}$ is

Options :

1. ✖ symmetric

2. ✔ diagonalizable

3. ✖ skew symmetric

4. ✖ singular

Question Number : 95 Question Id : 77951810701 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The necessary condition to diagonalize a matrix is that

Options :

1. ✖ the matrix is non-singular

2. ✔ its eigen vectors should be independent

3. ✖ its eigen values should be real

4. ✖ its all eigen values should be distinct

Question Number : 96 Question Id : 77951810702 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Which of the following matrices is NOT diagonalizable?

Options :

1. ✖ $\begin{bmatrix} 1 & 1 \\ 1 & 2 \end{bmatrix}$

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

3. ✖

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

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

Question Number : 97 Question Id : 77951810703 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If $\alpha = (-1,0,1), \beta = (2,0,-2) \epsilon V_3(R)$ an inner product space, then $\|\alpha + \beta\| =$_____

Options :

1. ✖ 2

2. ✔ $\sqrt{2}$

3. ✖ $-\sqrt{2}$

4. ✖ 0

Question Number : 98 Question Id : 77951810704 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

For the vectors $u = (a, b), v = (c, d)$ in C^2, the inner product of u and v is defined by $\langle u, v \rangle = a\bar{c} + b\bar{d}$. If $u = (1 + i, i), v = (i, 1 - i)$ then $\langle u, v \rangle =$_____

Options :

1. ✔ 0

2. ✖ $(1, -i)$

3. ✖ $(2i, -2i)$

4. ✖ $(1 + i, 1 - i)$

Question Number : 99 Question Id : 77951810705 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If α, β are vectors in an inner product space V, then_____

Options :

1. ✖ $\|\alpha+\beta\|^2 < \|\alpha\|^2 + \|\beta\|^2$

2. ✖ $\|\alpha+\beta\|^2 = \|\alpha\|^2 + \|\beta\|^2$

3. ✔ $\|\alpha+\beta\|^2 \leq \|\alpha\|^2 + \|\beta\|^2$

4. ✖ $\|\alpha+\beta\|^2 = \|\alpha-\beta\|^2$

Question Number : 100 Question Id : 77951810706 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Let V be an inner product space and $S = \{\alpha_1, \alpha_2, \ldots, \alpha_m\}$ be a finite subset of V. If S is an orthonormal set, then consider the following statements:

I: $\|\alpha_i\| = 1$ for each $\alpha_i \in S$.

II: $(\alpha_i, \alpha_j) = 0$ for $\alpha_i, \alpha_j \in S, i \neq j$.

Which of the following is correct?

Options :

1. ✔ both I and II are true

2. ✖ only I is true

3. ✖ only II is true

4. ✖

neither I nor II is true

Analytical Ability

Section Id :	779518211
Section Number :	2
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	44
Number of Questions to be attempted :	44
Section Marks :	50
Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518223
Question Shuffling Allowed :	Yes

Question Number : 101 Question Id : 77951810707 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

What is the volume of the cone?

I) The height of the cone is 10 cm.

II) The area of its base is 126 sq.cm

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✔ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 102 Question Id : 77951810708 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

What is the area of the triangle formed joining the points A, B and C?

I) A = (2, 5), B = (3, 2)

II) A, B and C lie on a straight line

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✔ Statement II alone is sufficient to answer the question

3. ✖ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 103 Question Id : 77951810709 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

Is the positive integer x odd?

I) x^2 is even

II) 4x is even

Options :

1. ✔ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✖ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 104 Question Id : 77951810710 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

What is the sum of the real numbers a, b, c?

I) $a + c = 4$

II) a, b, c are in arithmetic progression

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✔ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 105 Question Id : 77951810711 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

Will it be a Wednesday tomorrow?

I) Coming Wednesday is holiday

II) It is not Tuesday today

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✔ Statement II alone is sufficient to answer the question

3. ✖ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 106 Question Id : 77951810712 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

How old is the Son?

I) Mother was 22 years when the son was born

II) Son retired in his 58^{th} year and by then the mother was no more.

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✖ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✔ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 107 Question Id : 77951810713 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

In a class of 120 students, how many girls got distinction?

I) 20 boys in the class got distinction

II) 25 % of the students in the class got distinction

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✔ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 108 Question Id : 77951810714 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

What is the number of educated youth in the village?

I) In the village $\frac{1}{4}^{th}$ of the youth are educated

II) In the village $\frac{1}{5}^{th}$ of the youth are employed

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✖ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✔ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 109 Question Id : 77951810715 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

How old each of the father and son?

I) Four years ago the father was six times older than his son

II) After sixteen years, the father will be twice as old as his son

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖ Statement II alone is sufficient to answer the question

3. ✔ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 110 Question Id : 77951810716 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Note: A question is followed by data in the form of two statements labeled as I and II. Using the data choose the correct option:

What is the percentage of profit on the sale of 100 pens?

I) The cost price of each pen is rupees 80

II) The sale price of each pen is rupees 100

Options :

1. ✖ Statement I alone is sufficient to answer the question

2. ✖

Statement II alone is sufficient to answer the question

3. ✔ Both the statements I and II are sufficient to answer the question but neither statement alone is not sufficient

4. ✖ Both the statements I and II together are not sufficient to answer the question and additional data is required

Question Number : 111 Question Id : 77951810717 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

2, 10, 26, 50,_____, 122.

Options :

1. ✖ 80

2. ✖ 92

3. ✔ 82

4. ✖ 65

Question Number : 112 Question Id : 77951810718 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

8, 15, 28, 53, _____ , 199

Options :

1. ✖ 101

2. ✔ 102

3. ✖ 105

4. ✖ 103

Question Number : 113 Question Id : 77951810719 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

720, ? , 120, 30, 6, 1

Options :

1. ✖ 160

2. ✖ 200

3. ✔ 360

4. ✖ 240

Question Number : 114 Question Id : 77951810720 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

97, 86, 73, ?, 41, 22

Options :

1. ✖ 54

2. ✖ 56

3. ✔ 58

4. ✖ 60

Question Number : 115 Question Id : 77951810721 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is missing in the blank below?

ABC: ZYX:: EFG: _____

Options :

1. ✖ WVU

2. ✔ VUT

3. ✖ UTS

4. ✖ UVW

Question Number : 116 Question Id : 77951810722 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is missing in the blank below?

EJO, DHL, CFI, BDF, ...

Options :

1. ✔ ABC

2. ✖ ACE

3. ✖ ABD

4. ✖ ABE

Question Number : 117 Question Id : 77951810723 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is missing in the blank below?

V, S, P, M, ……..G

Options :

1. ✖ L

2. ✖ K

3. ✔ J

4. ✖ I

Question Number : 118 Question Id : 77951810724 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

3, 15, 35, 63, 99,_____

Options :

1. ✖ 121

2. ✔ 143

3. ✖ 122

4. ✖ 132

Question Number : 119 Question Id : 77951810725 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

289 : 324 :: _____ : 64

Options :

1. ✖ 36

2. ✔ 49

3. ✖ 55

4. ✖ 76

Question Number : 120 Question Id : 77951810726 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the missing number in the following sequence?

50 : 65 :: 290 :_____

Options :

1. ✖ 170

2. ✖ 226

3. ✖ 260

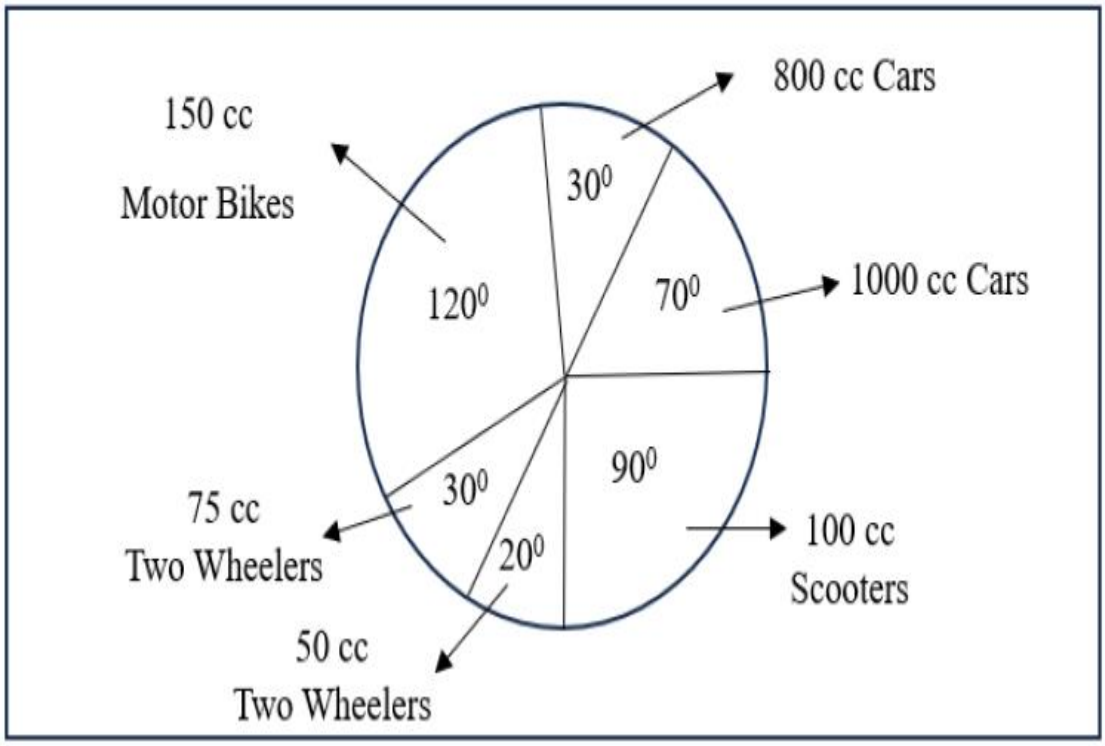
4. ✔ 325

Sub-Section Number :	2
Sub-Section Id :	779518224
Question Shuffling Allowed :	No

Question Id : 77951810727 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix

Question Numbers : (121 to 127)

An automobile company manufactures vehicles as given in the following Pie-chart. Answer the question after studying the Pie-chart.



Sub questions

Question Number : 121 Question Id : 77951810728 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The ratio of the 75 cc Two-Wheelers and 50 cc Two-Wheelers is

Options :

1. ✖ 2 : 1

2. ✖ 1 : 2

3. ✔ 3 : 2

4. ✖ 2 : 3

Question Number : 122 Question Id : 77951810729 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The percentage of 150 cc motor bikes in the total production by the company is

Options :

1. ✖ 30 %

2. ✔ 33 1/3 %

3. ✖ 32 1/3 %

4. ✖ 32 %

Question Number : 123 Question Id : 77951810730 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the number of 75 cc Two-Wheelers manufactured in a month is 2700, then the total number of vehicles manufactured by the company in that month is

Options :

1. ✔ 32400

2. ✖ 30860

3. ✖ 32600

4. ✖ 33800

Question Number : 124 Question Id : 77951810731 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a month, if the total number of 800 cc cars and 100 cc scooters produced is 4800, the number of 150 cc motor bikes produced in the same month is

Options :

1. ✔ 4800

2. ✖ 9600

3. ✖ 2400

4. ✖ 1200

Question Number : 125 Question Id : 77951810732 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The percentage of 100 cc scooters out of the total vehicles produced is

Options :

1. ✖ 50%

2. ✔ 25%

3. ✖ 75%

4. ✖ 20%

Question Number : 126 Question Id : 77951810733 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If in an year the total number of vehicles produced is 36000, the total number of cars produced in that year is

Options :

1. ✖ 25000

2. ✖ 15000

3. ✔ 10000

4. ✖ 12000

Question Number : 127 Question Id : 77951810734 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If the total number of 75 cc two wheelers produced in an year is 1200, the number of 50 cc two wheelers produced in the same year is

Options :

1. ✖ 1200

2. ✖ 1000

3. ✔ 800

4. ✖ 600

Sub-Section Number : 3
Sub-Section Id : 779518225
Question Shuffling Allowed : Yes

Question Number : 128 Question Id : 77951810735 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Directions: The number in each question below is to be codified in the following code:

Digit	7	2	1	5	3	9	8	6	4
Letter	W	L	M	S	I	N	D	J	B

What is the decoded word for 184632?

Options :

1. ✖ MDJBSI

2. ✖ MDJBIL

3. ✖ MDJBWL

4. ✔ MDBJIL

Question Number : 129 Question Id : 77951810736 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Directions: The number in each question below is to be codified in the following code:

Digit	7	2	1	5	3	9	8	6	4
Letter	W	L	M	S	I	N	D	J	B

What is the decoded word for 879341?

Options :

1. ✖ DWNIBS

2. ✖ DWNBIM

3. ✔ DWNIBM

4. ✖ NDWBIM

Question Number : 130 Question Id : 77951810737 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Directions: The number in each question below is to be codified in the following code:

Digit	7	2	1	5	3	9	8	6	4
Letter	W	L	M	S	I	N	D	J	B

What is the decoded word for 64928?

Options :

1. ✔ JBNLD

2. ✖ JBLND

3. ✖ BJNLD

4. ✖ DBNLS

Question Number : 131 Question Id : 77951810738 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

IN a certain code, 15789 is written as XTZAL and 2346 is written as NPSU. How is 23549 written in that code?

Options :

1. ✖ NPTUL

2. ✖ PNTXL

3. ✔ NPTSL

4. ✖ NBTSL

Question Number : 132 Question Id : 77951810739 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a code, the r^{th} letter is shifted to $(27\text{-}2r)^{th}$ letter for r = 1, 2…13, the fourteenth letter is shifted to 26^{th} letter and, for r = 15, 16…26, the r^{th} letter is shifted to $(2r\text{-}28)^{th}$ letter. For decoding the inverse process of the above is followed. Using this coding and decoding, answer the question:

Which letter is coded as Y?

Options :

1. ✔ A

2. ✖ N

3. ✖ B

4. ✖ M

Question Number : 133 Question Id : 77951810740 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a code, the r^{th} letter is shifted to $(27-2r)^{th}$ letter for r = 1, 2…13, the fourteenth letter is shifted to 26^{th} letter and, for r = 15, 16…26, the r^{th} letter is shifted to $(2r-28)^{th}$ letter. For decoding the inverse process of the above is followed. Using this coding and decoding, answer the question:

What is the code letter for P?

Options :

1. ✖ J

2. ✔ D

3. ✖ L

4. ✖ W

Question Number : 134 Question Id : 77951810741 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a code, the r^{th} letter is shifted to $(27-2r)^{th}$ letter for r = 1, 2…13, the fourteenth letter is shifted to 26^{th} letter and, for r = 15, 16…26, the r^{th} letter is shifted to $(2r-28)^{th}$ letter. For decoding the inverse process of the above is followed. Using this coding and decoding, answer the question:

What is the code word for POTA?

Options :

1. ✖ DLBY

2. ✖ DBYJ

3. ✔ DBLY

4. ✖ DLYB

Question Number : 135 Question Id : 77951810742 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a code, the r^{th} letter is shifted to $(27-2r)^{th}$ letter for r = 1, 2…13, the fourteenth letter is shifted to 26^{th} letter and, for r = 15, 16…26, the r^{th} letter is shifted to $(2r-28)^{th}$ letter. For decoding the inverse process of the above is followed. Using this coding and decoding, answer the question:

Which word is decoded as WMCL?

Options :

1. ✖ BELL

2. ✔ BELT

3. ✖ BOLT

4. ✖

BOLD

Question Number : 136 Question Id : 77951810743 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If a month in an year starts with Monday, then the date of the fourth day after the second Saturday in that month, will be

Options :

1. ✖ 16

2. ✔ 17

3. ✖ 18

4. ✖ 19

Question Number : 137 Question Id : 77951810744 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A dozen Mirrors are falling from certain height. Then the ratio of broken to unbroken mirrors may not in the ratio

Options :

1. ✖ 5:1

2. ✖ 1:2

3. ✔ 3:4

4. ✖ 1:3

Question Number : 138 Question Id : 77951810745 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The last day of December 2026 is a

Options :

1. ✖ Wednesday

2. ✖ Tuesday

3. ✖ Monday

4. ✔ Thursday

Question Number : 139 Question Id : 77951810746 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The ratio of the present ages of a father and his son is 2:1. If the ratio 10 years ago is 5:2, then the present age of the son is

Options :

1. ✔ 30

2. ✖ 25

3. ✖ 24

4. ✖ 32

Question Number : 140 Question Id : 77951810747 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$a * b = a^2+b^2-2ab \Longrightarrow ((a*a)) * (c*c) = ?$

Options :

1. ✔ 0

2. ✖ 1

3. ✖ 2

4. ✖ a+b+c

Question Number : 141 Question Id : 77951810748 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

A man walks 6km to the east and then turn to the south 2km.Again he turns to the east and walks 2km. Next he turns northwards and walks 8km. How far is he now from his starting point?

Options :

1. ✖ 18km

2. ✔ 10km

3. ✖ 16km

4. ✖ 12km

Question Number : 142 Question Id : 77951810749 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If 5 @ 6 = 61 and 8 @ 10 = 164, then 7 @ 9 =

Options :

1. ✖ 124

2. ✖

120

3. ✖ 32

4. ✔ 130

Question Number : 143 Question Id : 77951810750 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

How many Integers from 1 to 100 exist such that each is divisible by 5 and also has 5 as a digit?

Options :

1. ✖ 10

2. ✔ 11

3. ✖ 12

4. ✖ 20

Question Number : 144 Question Id : 77951810751 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

$a * b = a^2\text{-}ab+2 \Longrightarrow 2*(3*4) =$

Options :

1. ✖ 24

2. ✖ 16

3. ✖ 9

4. ✔ 8

Question Number : 145 Question Id : 77951810752 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The number of 3's that are preceded by 5 but not followed by 2 in the following sequence of digits is 3147531245321887538162537531675324

Options :

1. ✖ 7

2. ✖ 5

3. ✔ 4

4. ✖ 6

Question Number : 146 Question Id : 77951810753 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

If two circles of diameters 10 cm and 6 cm touch externally, then the distance between their centres is

Options :

1. ✖ 16 cm

2. ✖ 2 cm

3. ✖ 4 cm

4. ✔ 8 cm

Question Number : 147 Question Id : 77951810754 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

In a clock, the angle between the hours hand and minutes hand at 5 hour 10 minutes, is

Options :

1. ✖ 60°

2. ✔ 95°

3. ✖ 120°

4. ✖ 90°

Question Number : 148 Question Id : 77951810755 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Read the following information to answer the question:

I). A, B, C, D, E and F are sitting in a circle facing centre.
II). A is between B and E.
III). C is between D and F.
IV). E is to the immediate right of D.

What is F's position related to E?

Options :

1. ✖ Immediate left

2. ✖ Second to the Right

3. ✔ Third to the Right

4. ✖ Second to the left

Question Number : 149 Question Id : 77951810756 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Read the following information to answer the question:

I). A, B, C, D, E and F are sitting in a circle facing centre.
II). A is between B and E.
III). C is between D and F.
IV). E is to the immediate right of D.

Who is between E and C?

Options :

1. ✔ D

2. ✖ B

3. ✖ A

4. ✖ F

Question Number : 150 Question Id : 77951810757 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Read the following information to answer the question:

I). A, B, C, D, E and F are sitting in a circle facing centre.
II). A is between B and E.
III). C is between D and F.
IV). E is to the immediate right of D.

Who is to the Immediate Right of A?

Options :

1. ✖ D

2. ✖ C

3. ✖ F

4. ✔ B

Communicative English

Section Id :	779518212
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	46
Number of Questions to be attempted :	46
Section Marks :	50
Section Negative Marks :	0
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	779518226
Question Shuffling Allowed :	Yes

Question Number : 151 Question Id : 77951810758 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blanks with the **correct article** from the given options:

Land Survey is _____ ongoing activity.

Options :

1. ✖ A

2. ✖ The

3. ✔ An

4. ✖ No article needed

Question Number : 152 Question Id : 77951810759 Question Type : MCQ

Correct Marks : 1 Wrong Marks : 0

Fill in the blanks with the **correct article** from the given options:

My friend is playing _____ role of a European Merchant in his movie.

Options :

1. ✔ The

2. ✖ A

3. ✖ An

4. ✖ No article is needed.

Question Number : 153 Question Id : 77951810760 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Complete the sentence with **right preposition** from the options given below:

There is a useful costal line _____ 960 KMs in our state.

Options :

1. ✖ On

2. ✖ beside

3. ✔ of

4. ✖ with

Question Number : 154 Question Id : 77951810761 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Complete the sentence with **right preposition** from the options given below:

She danced continuously _____ one hour.

Options :

1. ✖ from

2. ✖ above

3. ✔ for

4. ✖ in

Question Number : 155 Question Id : 77951810762 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Use the **correct form of the tense** given in the options to fill in the blank.

The cop _____ the case for six days.

Options :

1. ✖ is inspecting

2. ✔ has been inspecting

3. ✖ had been inspecting

4. ✖ was inspecting

Question Number : 156 Question Id : 77951810763 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Use the **correct form of the tense** given in the options to fill in the blank.

Listen, somebody _____ at the door.

Options :

1. ✖ has been knocking

2. ✖ had knocked

3. ✖ has knocked

4. ✔ is knocking

Question Number : 157 Question Id : 77951810764 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the right option to fill in the blank to **convert the voice** of the sentence from active into passive.

The team has collected the details of the incident. (A.V) The details of the incident _____ by the team. (PV)

Options :

1. ✖ Are collected

2. ✖ were collected

3. ✔ have been collected

4. ✖ has been collected

Question Number : 158 Question Id : 77951810765 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with **appropriate form of the verb** from the given options.

Either of the students _____ for the competition.

Options :

1. ✖ Have been eligible

2. ✔ is eligible

3. ✖ were eligible

4. ✖ are eligible

Question Number : 159 Question Id : 77951810766 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with **appropriate form of the verb** from the given options.

The earth _____ round the sun.

Options :

1. ✖ Is revolving

2. ✔ revolves

3. ✖ was revolving

4. ✖ has been revolving

Question Number : 160 Question Id : 77951810767 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **question tag** for the following statement.

She did complete her work successfully, _____?

Options :

1. ✖ Isn't she

2. ✔ didn't she

3. ✖ wasn't she

4. ✖ isn't it

Question Number : 161 Question Id : 77951810768 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the **synonym** for the word, **STURDY**.

Options :

1. ✔ Strong

2. ✖ Adamant

3. ✖ sweet

4. ✖ soft

Question Number : 162 Question Id : 77951810769 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the **synonym** for the word, **AFFLUENT**

Options :

1. ✖

Flowing

2. ✖ fraud

3. ✖ fortunate

4. ✔ rich

Question Number : 163 Question Id : 77951810770 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the **antonym** for the word, **DENY**

Options :

1. ✖ reject

2. ✖ perish

3. ✔ accept

4. ✖ punish

Question Number : 164 Question Id : 77951810771 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the **antonym** for the word, **ARDUOUS**

Options :

1. ✖ strong

2. ✔ easy

3. ✖ Countless

4. ✖ great

Question Number : 165 Question Id : 77951810772 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the one which can be **substituted for the given words**/expression:

One who is all powerful:

Options :

1. ✔ omnipotent

2. ✖ polyglot

3. ✖ protagonist

4. ✖ Hero

Question Number : 166 Question Id : 77951810773 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the one which can be **substituted for the given words**/sentence:

The one who studies language:

Options :

1. ✖ Omniscient

2. ✖ Numismatist

3. ✔ Linguist

4. ✖ Poliglot

Question Number : 167 Question Id : 77951810774 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose **a prefix/suffix** to fill in the blank with the right form of the word given in the bracket

He asked me to collect _____ (Sense) News.

Options :

1. ✖ -cial

2. ✔ -ational

3. ✖ -ary

4. ✖ -ory

Question Number : 168 Question Id : 77951810775 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with **the right word**:

This is a _____ invitation to you.

Options :

1. ✔ cordial

2. ✖ chordal

3. ✖ cardiac

4. ✖ cardinal

Question Number : 169 Question Id : 77951810776 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with **the right word**:

I want to buy sufficient _____ for my office.

Options :

1. ✖ glossary

2. ✖ grocery

3. ✖ stationary

4. ✔ stationery

Question Number : 170 Question Id : 77951810777 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with **the right word**.

He has a building taken on ----------from his friend.

Options :

1. ✖ lean

2. ✔ lease

3. ✖ line

4. ✖ cease

Question Number : 171 Question Id : 77951810778 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the part of the sentence that has a **mistake**.

The bell / rang while / I talking / to my friend.

1 2 3 4

Options :

1. ✖ 1

2. ✖ 2

3. ✔ 3

4. ✖ 4

Question Number : 172 Question Id : 77951810779 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the part of the sentence that has a **mistake**.

Much water / has flown / under / the bridge.

1 2 3 4

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 3

4. ✖ 4

Question Number : 173 Question Id : 77951810780 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the part of the sentence that has a **mistake.**

I won't / get off the bus / until / it will stop.

1 2 3 4

Options :

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

Question Number : 174 Question Id : 77951810781 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the part of the sentence that has a **mistake.**

One of the soldiers / who were / very smart / could escape.

1 2 3 4

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 3

4. ✖ 4

Question Number : 175 Question Id : 77951810782 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Identify the part of the sentence that has a **mistake**.

My sister / is studying / Medicine course / since last year.

1 2 3 4

Options :

1. ✖ 1

2. ✔ 2

3. ✖ 3

4. ✖ 4

Question Number : 176 Question Id : 77951810783 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **alternative to** replace the *italicized and underlined* part which may **improve the sentence**:

The theft *happened* even before the watchman noticed.

Options :

1. ✖ happened

2. ✖ has happened

3. ✖ was happened

4. ✔ had happened

Question Number : 177 Question Id : 77951810784 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **alternative to** replace the *italicized and underlined* part which may **improve the sentence**:

The teacher *told all the boys* to go for morning walk daily.

Options :

1. ✔ Suggested all the boys

2. ✖ ordered all the boys

3. ✖ commanded all the boys

4. ✖ pleased all the boys

Question Number : 178 Question Id : 77951810785 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **alternative to** replace the *italicized and underlined* part which may **improve the sentence**:

The rain has been falling heavily for the last half an hour.

Options :

1. ✖ The rain has been falling as bolt from the blue sky

2. ✔ It has been raining cats and dogs

3. ✖ The rain has been downpouring

4. ✖ The rain is falling heavily

Question Number : 179 Question Id : 77951810786 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **alternative to** replace the *italicized and underlined* part which may **improve the sentence**:

The students of this university are *better than any other university*.

Options :

1. ✖ better than that university

2. ✖ better than of any other university

3. ✔ better than those of any other university

4. ✖ no improvement is necessary

Question Number : 180 Question Id : 77951810787 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct **alternative to** replace the *italicized and underlined* part which may **improve the sentence**:

No sooner did the Inspector of police enter the station *the constables stood up.*

Options :

1. ✖ Then the constables stood up

2. ✖ when the constables stood up

3. ✔ than the constables stood up.

4. ✖ No improvement is necessary

Question Number : 181 Question Id : 77951810788 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Find the **exact meaning** of the italicized word:
"The test was *a piece of cake*; I finished it very quickly."

Options :

1. ✔ something very easy to do

2. ✖ something very tasty

3. ✖ something very strong

4. ✖ something very casual

Question Number : 182 Question Id : 77951810789 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the **exact meaning** of the idiom/phrase used in the sentence below.

To *break the ice* at the party, he said hello to the person next to him.

Options :

1. ✖ To say hello

2. ✖ to cut the ice

3. ✔ to start a conversation

4. ✖ to make situation serious

Question Number : 183 Question Id : 77951810790 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with the **correct phrasal verb** choosing from the given below:

Many efforts are made to control the _____rate of students in school education.

Options :

1. ✖ drop up

2. ✔ drop out

3. ✖ drop in

4. ✖ drop down

Question Number : 184 Question Id : 77951810791 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with the **correct phrasal verb** choosing from the given below:

We need to ----------the wise people always for our progress.

Options :

1. ✖ stand by

2. ✖ stay away

3. ✔ stick around

4. ✖ stick on

Question Number : 185 Question Id : 77951810792 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Fill in the blank with the **correct phrasal verb** choosing from the given below:

Elders in the society must _____ the values and traditions to the younger generation.

Options :

1. ✔ Pass on

2. ✖ pass out

3. ✖ pass in

4. ✖ pass through

Sub-Section Number : 2
Sub-Section Id : 779518227
Question Shuffling Allowed : No

Question Id : 77951810793 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix
Question Numbers : (186 to 190)

To answer the question read the following passage carefully and choose the correct option.

My grandmother and I were good friends. My parents left me with her when they went to live in the city and we were constantly together. She used to wake me up in the morning and get me ready for school. She said her morning prayer in a monotonous singsong while she bathed and dressed me, in the hope that I would listen and get to know it by heart; I listened because I loved her voice but never bothered to learn it. Then she would fetch me wooden slate which she had already washed. After a breakfast of a thick, stale chapatti with a little butter and sugar spread on it, we went to school. She carried several stale chapattis with her for the village dogs.

Sub questions

Question Number : 186 Question Id : 77951810794 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The gist of the paragraph is that the writer enjoyed a close association with his grandmother.

Options :

1. ✖ False

2. ✖ Partially false

3. ✔ True

4. ✖ can't say

Question Number : 187 Question Id : 77951810795 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Why did he listen to the morning prayer of his grandmother?

Options :

1. ✔ because he loved his grandmother's voice

2. ✖ because to get to know it by heart

3. ✖ because to learn it

4. ✖ because he loved his grandmother

Question Number : 188 Question Id : 77951810796 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

The word, "**monotonous**" means:

Options :

1. ✖ interesting

2. ✖ serious

3. ✔ uninteresting

4. ✖ humorous

Question Number : 189 Question Id : 77951810797 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

What is the antonym of the word, "**stale**"

Options :

1. ✔ fresh

2. ✖ dull

3. ✖ original

4. ✖ pale

Question Number : 190 Question Id : 77951810798 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

"*Then she would fetch me wooden slate which she had already washed*". What is the Tense of the underlined part of the above sentence?

Options :

1. ✖ Simple Past

2. ✔ Past perfect

3. ✖ Simple future

4. ✖ Present Perfect

Sub-Section Number : 3
Sub-Section Id : 779518228
Question Shuffling Allowed : Yes

Question Number : 191 Question Id : 77951810799 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to arrange the words in the jumbled sentence to make it meaningful.

Modern parents/ to silence/ use Television/ young children.

A B C D

Options :

1. ✖ ACDB

2. ✖ BCAD

3. ✖ DBCA

4. ✔ ACBD

Question Number : 192 Question Id : 77951810800 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to arrange the words in the jumbled sentence to make it meaningful.

The Sun/ light and energy/to the earth/has been providing.

A B C D

Options :

1. ✔ ADBC

2. ✖ BCDA

3. ✖ ABCD

4. ✖ BACD

Question Number : 193 Question Id : 77951810801 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to arrange the words in the jumbled sentence to make it meaningful.

not only a great musician / Renuka is /a good painter / but also.

A B C D

Options :

1. ✖ ACBD

2. ✖ ADCB

3. ✔ BADC

4. ✖ BCAD

Question Number : 194 Question Id : 77951810802 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to arrange the words in the jumbled sentence to make it meaningful.

Enjoying ourselves / we were / last year at this time / in Ooty

A B C D

Options :

1. ✖ DCAB

2. ✖ DABC

3. ✔ CBAD

4. ✖ CDAB

Question Number : 195 Question Id : 77951810803 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to arrange the words in the jumbled sentence to make it meaningful.

The wise astrologer / the wild banian tree / under / used to sit.

A B C D

Options :

1. ✖ ABCD

2. ✔ ADCB

3. ✖ ADBC

4. ✖ BDCA

Question Number : 196 Question Id : 77951810804 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to show the function of the following sentence.

Better you stop watching reels. It's a waste of time.

Options :

1. ✔ advising

2. ✖ suggesting

3. ✖ request

4. ✖ complement

Question Number : 197 Question Id : 77951810805 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to show the function of the following sentence.

Fetch me a glass of cold water.

Options :

1. ✖ complaining

2. ✖ seeking permission

3. ✖ suggestion

4. ✔ commanding

Question Number : 198 Question Id : 77951810806 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to show the function of the following sentence.

Your presence with your family and friends is highly solicited.

Options :

1. ✔ Invitation

2. ✖ commanding

3. ✖ suggestion

4. ✖ adoring

Question Number : 199 Question Id : 77951810807 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to show the function of the following sentence.

I am sorry that I could not complete the work in time.

Options :

1. ✔ apologising

2. ✖ commanding

3. ✖ requesting

4. ✖ suggesting

Question Number : 200 Question Id : 77951810808 Question Type : MCQ
Correct Marks : 1 Wrong Marks : 0

Choose the correct option to show the function of the following sentence.

Madam, he is disturbing me while I am doing my home-work.

Options :

1. ✖ apologizing

2. ✖ appreciating

3. ✔ complaining

4. ✖ commenting