

ELITE EDUVENTURES DU MCA 2021 (ACTUAL PAPER)



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1)
If $f(x) = \begin{cases} \frac{1}{|x|}, & |x| > 2 \\ A + B * x^2, & |x| \leq 2 \end{cases}$

Then $f(x)$ is differentiable at $x = -2$ for

1. $A = \frac{3}{4}, B = -\frac{1}{16}$

2. $A = \frac{-3}{4}, B = \frac{1}{16}$

3. $A = -\frac{3}{4}, B = -\frac{1}{16}$

4. $A = \frac{3}{4}, B = \frac{1}{16}$

Correct Answer :-

• $A = \frac{3}{4}, B = -\frac{1}{16}$



2) The equation $e^{x-8} + 2x - 17 = 0$ has ... real root(s),

1. 8

2. 4

3. 2

4. 1

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Correct Answer :-

• 1

3) Which of the following statements is not true?

1. $f(x) = e^{-|x|}$ is uniformly continuous on $(-\infty, \infty)$

2. $f(x) = x^2$ is uniformly continuous on $[0, \infty)$

3. $f(x) = \frac{1}{x^2}$ is uniformly continuous on $(0, 1)$

4. $f(x) = \frac{\sin x^3}{x} + \sqrt{x}$ is uniformly continuous on $[1, \infty)$

Correct Answer :-

• $f(x) = \frac{1}{x^2}$ is uniformly continuous on $(0, 1)$

4) If $F(x) = \int \frac{dx}{(1+x^2)\sqrt{1-x^2}}$ and $F(1) = 0$

then for $x > 0$, $F(x)$ is equal to:

1. $\frac{1}{\sqrt{2}} \tan^{-1}\left\{\frac{\sqrt{2} x}{\sqrt{1+x^2}}\right\} + \frac{\pi}{\sqrt{2}}$

2. $\frac{1}{\sqrt{2}} \tan^{-1}\left\{\frac{\sqrt{2} x}{\sqrt{1+x^2}}\right\} - \frac{\pi}{2\sqrt{2}}$

3. $\frac{1}{\sqrt{2}} \tan^{-1}\left\{\frac{\sqrt{2} x}{\sqrt{1-x^2}}\right\} + \frac{\pi}{2\sqrt{2}}$

4. $\frac{1}{\sqrt{2}} \tan^{-1}\left\{\frac{\sqrt{2} x}{\sqrt{1-x^2}}\right\} - \frac{\pi}{2\sqrt{2}}$

Correct Answer :-

• $\frac{1}{\sqrt{2}} \tan^{-1}\left\{\frac{\sqrt{2} x}{\sqrt{1-x^2}}\right\} - \frac{\pi}{2\sqrt{2}}$



5) The area of the plane figure bounded by

$y = \sqrt{x}, x \in [0,1];$

$y = x^2, x \in [1,2]$ and

$y = -x^2 + 2x + 4, x \in [0,2]$ is:

1. 19/3
2. 10/7
3. 3/5
4. 4/3

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Correct Answer :-

- 19/3

6) Let $\langle s_n \rangle$ be a sequence such that

$s_1 = \sqrt{2}; s_{n+1} = \sqrt{2s_n}$ for $n \geq 1$.

Which one of the following is correct?

1. $\langle s_n \rangle$ is divergent sequence
2. $\langle s_n \rangle$ is convergent sequence and $\lim_{n \rightarrow \infty} s_n > 2$.
3. $\langle s_n \rangle$ is bounded above by 2
4. $\langle s_n \rangle$ is decreasing sequence.

Correct Answer :-

- $\langle s_n \rangle$ is bounded above by 2

7) Given the *sequence* $\langle s_n \rangle$ where

$$s_n = [(n+1)(n+2) \dots (n+n) * \frac{1}{n^n}]^{\frac{1}{n}}$$

The value of $\lim_{n \rightarrow \infty} s_n$ is equal to

1. $1/e$
2. $2/e$
3. $4/e$
4. 1

Correct Answer :-

- $4/e$

8) The series $\sum_{n=0}^{\infty} \frac{1}{(2n+1)^2}$ converges to:

1. $\frac{\pi^2}{6}$
2. $\frac{\pi^2}{4}$
3. $\frac{3\pi^2}{4}$
4. $\frac{\pi^2}{8}$



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Correct Answer :-

- $\frac{\pi^2}{8}$

9) Let $f : \mathcal{R}^2 \rightarrow \mathcal{R}$ be defined as

$$(x,y) = \begin{cases} \frac{x^2 y}{x^2 + y^2} & , (x,y) \neq (0,0) \\ 0 & , (x,y) = (0,0) \end{cases}$$

Then at the point (0,0) the function f is

1. Continuous and all directional derivatives of f exist.
2. Continuous and not all directional derivatives of f exist.
3. Not Continuous and not all directional derivatives of f exist.
4. Not Continuous and but all directional derivatives of f exist.

Correct Answer :-

- Not Continuous and but all directional derivatives of f exist.

10) The following parametric equations represents

$$x = t^2 - t, y = t^2 + t$$

(Here t is the parameter)

1. Pair of lines
2. Circle
3. Parabola
4. Hyperbola

Correct Answer :-

- Parabola

11) The eccentricity of ellipse $x^2 + 4y^2 - 4x - 8y + 7 = 0$ is

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



Correct Answer :-

- $\frac{\sqrt{3}}{2}$

12) If e and f are eccentricities of a hyperbola and its conjugate respectively then the value of $e^2 + f^2 - 2$ is equal to

1. $a^2 + b^2$
2. $a^2 + \frac{b^2}{a^2}$
3. $b^2 + \frac{a^2}{b^2}$
4. $\left(\frac{a}{b}\right)^2 + \left(\frac{b}{a}\right)^2$

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Correct Answer :-

- $\left(\frac{a}{b}\right)^2 + \left(\frac{b}{a}\right)^2$

13)

A sphere of radius $2r$ passes through the origin and points of intersection of the plane $\frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 1$ with the coordinate axes. These four points are used to form a tetrahedron. The locus of the centroid of the tetrahedron is a:

1. Circle
2. Parabola
3. Sphere

4. Cone

Correct Answer :-

- Sphere

14) The value of the gradient of $z = ye^z$ at point (0,3) is:

1. $3\sqrt{10}$
2. $10\sqrt{3}$
3. $1/\sqrt{10}$
4. $\sqrt{10}$

Correct Answer :-

- $\sqrt{10}$

15) Which of the following is false:

1. Every convergent positive series is convergent.
2. Every absolutely convergent series is convergent
3. If series $\sum s_n$ converges and $\sum |s_n|$ diverges then $\sum s_n$ conditionally convergent.
4. The series $1 - 2^{-2} + 3^{-2} - 4^{-2} + \dots$ is a divergent series.



Correct Answer :-

- The series $1 - 2^{-2} + 3^{-2} - 4^{-2} + \dots$ is a divergent series.

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16) For $x \in \mathbb{R}$, let $f(x) = x^2$ and $g(x) = \sin^2 x$. Let $\alpha, \beta, \alpha < \beta$, be the roots of the quadratic equation $9x^2 - 9x\pi + 2\pi^2 = 0$. The area bounded by the curve $y(x) = (f \circ g)(x)$, and the lines $x = \alpha, x = \beta, y = 0$, where $f \circ g$ is the composition of the functions f and g , is

1. $\frac{\pi}{8}$
2. $\frac{\pi}{4} + \frac{5\sqrt{3}}{16}$
3. $\frac{\pi}{8} + \frac{9\sqrt{3}}{16}$
4. $\frac{\pi}{8} + \frac{\sqrt{3}}{4}$

Correct Answer :-

- $\frac{\pi}{8} + \frac{9\sqrt{3}}{16}$

• $\frac{\pi}{8} + \frac{\sqrt{3}}{16}$

17) The integral $\int \sqrt{x + \sqrt{x^2 + 2}} dx = A(x + \sqrt{x^2 + 2})^k + \frac{B}{(x + \sqrt{x^2 + 2})^p} + C$, C is the constant of integration. Then

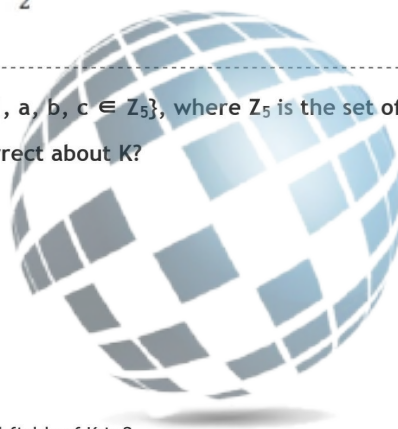
1. $A = \frac{1}{2}, B = -3, k = \frac{1}{2}, p = \frac{3}{2}$
2. $A = \frac{1}{3}, B = -2, k = \frac{3}{2}, p = \frac{1}{2}$
3. $A = \frac{1}{2}, B = -3, k = \frac{1}{2}, p = -\frac{3}{2}$
4. $A = \frac{1}{3}, B = -2, k = \frac{1}{2}, p = \frac{3}{2}$

Correct Answer :-

• $A = \frac{1}{3}, B = -2, k = \frac{3}{2}, p = \frac{1}{2}$

18) Let $K = \{a + b\omega + c\omega^2 : \omega \neq 1, \omega^3 = 1, a, b, c \in \mathbb{Z}_5\}$, where \mathbb{Z}_5 is the set of integers multiplicative modulo 5. Then which one of the following is NOT correct about K ?

1. K has no zero divisor
2. K has only one idempotent
3. Every element of K is not a unit
4. K is a field and the number of non-isomorphic subfields of K is 2



Correct Answer :-

- K has only one idempotent

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19) Let $G = U(98) = \{k \in \mathbb{N} : k \leq 98, \text{ and } \text{GCD}(k, 98) = 1\}$ be a group, where \mathbb{N} is the set of all natural numbers. The number of generators of the largest cyclic subgroup of G is

1. 12
2. 32
3. 42
4. 49

Correct Answer :-

- 12

20) Let $M = \begin{bmatrix} i & 0 \\ 0 & -i \end{bmatrix}$ and $N = \begin{bmatrix} 0 & 1 \\ -1 & 0 \end{bmatrix}$ over the field of complex numbers, where $i = \sqrt{-1}$. Let G be a group generated by M and N . Which one of the following is NOT correct about G ?

1. G is non-abelian group of order 8
2. Centre of G is of order 2
3. G has a normal subgroup
4. Centre of G is of order 4

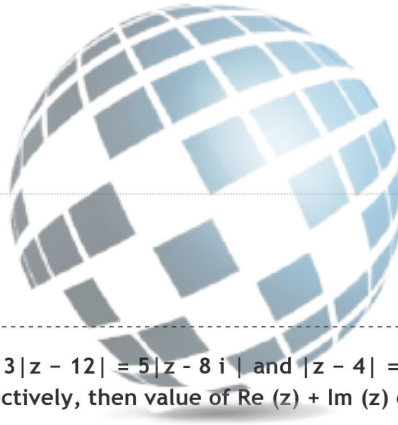
Correct Answer :-

- Centre of G is of order 2

21)

Let $f: \mathbb{R} \rightarrow \mathbb{R}$ be a twice differentiable function,
and $g: \mathbb{R}^2 \rightarrow \mathbb{R}$ be given by $g(x, y) = f(x^2 - y^2)$.
Then $\frac{\partial}{\partial x} \left(\frac{\partial g}{\partial x} \right) + \frac{\partial}{\partial y} \left(\frac{\partial g}{\partial y} \right) - 2 \frac{\partial}{\partial x} \left(\frac{\partial g}{\partial y} \right)$ equals

1. $4(x + y)^2 f''(x^2 - y^2)$
2. $4(x - y)^2 f''(x^2 - y^2)$
3. $4(x^2 - y^2 - 2xy) f''(x^2 - y^2)$
4. $4(x^2 + y^2 + xy) f''(x^2 - y^2)$



Correct Answer :-

- $4(x + y)^2 f''(x^2 - y^2)$

22) Let z be a complex number satisfying $3|z - 12| = 5|z - 8i|$ and $|z - 4| = |z - 8|$, where $i^2 = -1$. If $\text{Re}(z)$ and $\text{Im}(z)$ are the real and the imaginary parts of z respectively, then value of $\text{Re}(z) + \text{Im}(z)$ equals [Question ID = 11347]

1. -11
2. 23
3. 21
4. -13

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Correct Answer :-

- 23

23)

Let the Taylor's series of the function $f(x) = \frac{1}{(1-x)^3}$ at $x = 0$ be $\sum_0^\infty a_n x^n$.

The value of $a_{15} - a_{13}$ is equal to

1. 2
2. 30
3. 31
4. 62

Correct Answer :-

- 31

24)

The growth rate $\frac{dN}{dt}$ of the population N of the rabbits in a certain wildlife garden is proportional to the unutilized opportunity for growth described by the differential equation

$$\frac{dN}{dt} = k(750 - N), \text{ where } k \text{ is the constant of proportionality.}$$

It is given that the population of the rabbits at $t = 0$ is 100, and after 2 years their population has grown to 230. The population of rabbits after 4 years is

1. 234
2. 316
3. 433
4. 334

Correct Answer :-

- 334

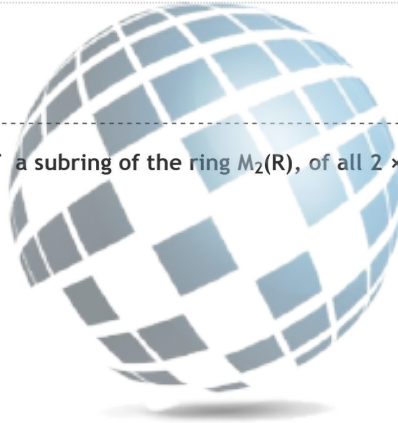
25) The number of cyclic subgroups of order 15 in a group $G = Z_{30} \oplus Z_{20}$ equals

[Question ID = 11350]

1. 12
2. 6
3. 5
4. 4

Correct Answer :-

- 6



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26) Which one of the following sets is NOT a subring of the ring $M_2(\mathbb{R})$, of all 2×2 real matrices?

1. $\left\{ \begin{pmatrix} a & b \\ 0 & c \end{pmatrix} : a, b, c \in \mathbb{R} \right\}$
2. $\left\{ \begin{pmatrix} a & a \\ b & b \end{pmatrix} : a, b, c \in \mathbb{R} \right\}$
3. $\left\{ \begin{pmatrix} a & 1 \\ 1 & b \end{pmatrix} : a, b, c \in \mathbb{R} \right\}$
4. $\left\{ \begin{pmatrix} a & b \\ b & a \end{pmatrix} : a, b, c \in \mathbb{R} \right\}$

Correct Answer :-

- $\left\{ \begin{pmatrix} a & 1 \\ 1 & b \end{pmatrix} : a, b, c \in \mathbb{R} \right\}$

27)

In a triangle ABC, let the sides AB and AC be represented by the vectors

$\hat{i} - 3\hat{j} + \sqrt{2}\hat{k}$ and $3\hat{i} + \hat{j} + \sqrt{2}\hat{k}$, respectively.

Let θ be the $\angle ABC$ and d be the length of the median of $\triangle ABC$ drawn from A on the side BC.

Then

1. $\theta = 180^\circ - \cos^{-1} \sqrt{\frac{5}{12}}$ and $d = \sqrt{7}$
2. $\theta = 180^\circ - \cos^{-1} \sqrt{\frac{5}{12}}$ and $d = \sqrt{5}$
3. $\theta = \cos^{-1} \sqrt{\frac{5}{12}}$ and $d = \sqrt{7}$

4. $\theta = \cos^{-1} \sqrt{\frac{5}{12}}$ and $d = \sqrt{5}$

Correct Answer :-

• $\theta = 180^\circ - \cos^{-1} \sqrt{\frac{5}{12}}$ and $d = \sqrt{7}$

28)

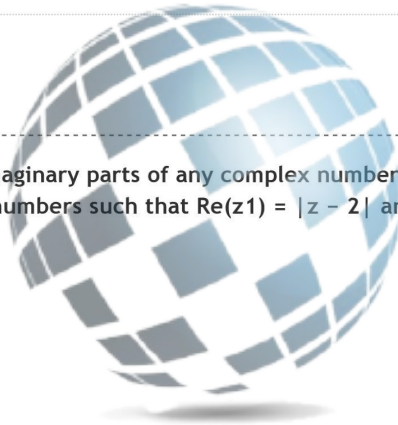
Let $M = \begin{bmatrix} 50 & 20 \\ 20 & 80 \end{bmatrix}$. Let λ_1 and λ_2 be the eigenvalues of M and their eigenvectors be $X_1 = \begin{pmatrix} 20 \\ \lambda_1 - 50 \end{pmatrix}$ and $X_2 = \begin{pmatrix} \lambda_2 - 80 \\ 20 \end{pmatrix}$, respectively.

The value of $(X_1 + X_2)^T (X_1 - X_2) + (X_1)^T X_2$ equals

1. 5600
2. 1600
3. 0
4. 4000

Correct Answer :-

- 0



29) Let $\text{Re}(z)$ and $\text{Im}(z)$ be the real and imaginary parts of any complex number z , and $\arg(z)$ denotes the principal argument of z . Let z_1 and z_2 be two distinct complex numbers such that $\text{Re}(z_1) = |z_1 - 2|$ and $\text{Re}(z_2) = |z_2 - 2|$. If $\arg(z_1 - z_2) = \pi/6$ then

1. $\text{Im}(z_1 + z_2) = 4\sqrt{3}$
2. $\text{Im}(z_1 + z_2) = \frac{4}{\sqrt{3}}$
3. $\text{Re}(z_1 - z_2) = 8$
4. $\text{Re}(z_1 - z_2) = 9$

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Correct Answer :-

- $\text{Im}(z_1 + z_2) = 4\sqrt{3}$

30) Which one of the following statements is NOT correct in the ring $= Z_4 \oplus Z_6$?

1. The set of all units in R is $\{(1, 1), (1, 5), (3, 1), (3, 5)\}$
2. The set of all nilpotent elements in R is $\{(0, 0), (0, 2)\}$
3. The total number of the zero-divisors in R is 28.
4. The set of zero-divisors is $\{(a, b) : a = 0, 2 \text{ and } b = 0, 2, 3, 4\}$

Correct Answer :-

- The set of zero-divisors is $\{(a, b) : a = 0, 2 \text{ and } b = 0, 2, 3, 4\}$

31) Given that $3^x = 656$. The value of 5^{x-5} is ...[Question ID = 11356]

1. 81
2. 125
3. 225
4. 1/125

Correct Answer :-

- 125

32) What is the next term in the series 6, 20, 42, 72, 110, ... is[Question ID = 11357]

1. 156
2. 210
3. 110
4. 196

Correct Answer :-

- 156

33) Next term in the series zaa, yeb, xic, wod, vue, ... is

1. uaf
2. uef
3. teg
4. tag

Correct Answer :-

- uaf



34) Age of a child is half of the age of father. Twenty years ago the age of father was 10 times the age of son. What is the age of father?[Question ID = 11359]

1. 60 years
2. 55 years
3. 50 years
4. 45 years

Correct Answer :-

- 45 years

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35) In a race of 1 Kilometer, athlete A beats athlete B by 50 meters, in another race of 500 meters, athlete B beats athlete C by 50 meters. By how many meters (Approximately) can athlete A beat athlete C in a race of 400 meters?

1. 50 meters
2. 58 meters
3. 62 meters
4. 70 meters

Correct Answer :-

- 58 meters

36) Persons A, B, and C can finish a work in 15, 10, and 12 days respectively. Person B and person C start the work together but are asked to leave after 4 days. In how many days will the remaining work be done by person A?

1. 2 days
2. 3 days
3. 4 days

4. 5 days

Correct Answer :-

- 4 days

Topic:- MCA B

1) The causes and physical characteristics of pandemics and disasters are very different. More than any previous disaster such as Ebola, HIV, SARS, TB and malaria, the Coronavirus Disease (COVID-19) has exposed underlying risks and vulnerabilities and challenged the traditional notion of risk. The impact on population groups with pre-existing vulnerabilities has been particularly severe especially where the health crisis has turned into a humanitarian and economic crisis. There are examples of countries.

In the Asia-Pacific region that experienced disasters in the year or months before the onset of the COVID-19 pandemic and where the impacts of both the virus itself and the government response to contain its spread have either reinforced the socio-economic impacts of the previous disaster or have impeded planned recovery efforts. In April 2020, the small island states of Fiji, Solomon Islands, Tonga and Vanuatu were impacted by Tropical Cyclone Harold. While they were relatively isolated from the health risks of COVID-19 due to early closure of borders, they were already feeling the effects of economic losses due to reduced market demand from tourism, fisheries and global commodities

Which of the following is a vulnerable group?

1. Persons with pre-existing disabilities
2. People living with pet animals
3. People living in multi-storeyed buildings
4. People living in residential complexes



Correct Answer :-

- Persons with pre-existing disabilities

2) The causes and physical characteristics of pandemics and disasters are very different. More than any previous disaster such as Ebola, HIV, SARS, TB and malaria, the Coronavirus Disease (COVID-19) has exposed underlying risks and vulnerabilities and challenged the traditional notion of risk. The impact on population groups with pre-existing vulnerabilities has been particularly severe especially where the health crisis has turned into a humanitarian and economic crisis. There are examples of countries.

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What disaster struck island states of Fiji?

1. Earthquake
2. Floods
3. Cyclone
4. Economic losses

Correct Answer :-

- Cyclone

3) The causes and physical characteristics of pandemics and disasters are very different. More than any previous disaster such as Ebola, HIV, SARS, TB and malaria, the Coronavirus Disease (COVID-19) has exposed underlying risks and vulnerabilities and challenged the traditional notion of risk. The impact on population groups with pre-existing vulnerabilities has

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Which of the following is false?

1. COVID 19 has challenged the traditional notion of risk.
2. In Fiji economic losses occurred due to reduced market from tourism.
3. Many countries experienced disasters in the years or months before the onset of the COVID-19
4. The characteristics of TB and COVID 19 are same.

Correct Answer :-

- The characteristics of TB and COVID 19 are same.

4) The causes and physical characteristics of pandemics and disasters are very different. More than any previous disaster such as Ebola, HIV, SARS, TB and malaria, the Coronavirus Disease (COVID-19) has exposed underlying risks and vulnerabilities and challenged the traditional notion of risk .The impact on population groups with pre-existing vulnerabilities has been particularly severe especially where the health crisis has turned into a humanitarian and economic crisis. There are examples of countries.

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In the full form of COVID

1. 'CO' stands for 'corona,' 'VI' for 'virus,' and 'D' for disease.
2. 'CO' stands for 'corona,' 'V' for 'virus,' 'I' for induced and 'D' for disease.
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Correct Answer :-

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5) The causes and physical characteristics of pandemics and disasters are very different. More than any previous disaster such as Ebola, HIV, SARS, TB and malaria, the Coronavirus Disease (COVID-19) has exposed underlying risks and vulnerabilities and challenged the traditional notion of risk .The impact on population groups with pre-existing vulnerabilities has been particularly severe especially where the health crisis has turned into a humanitarian and economic crisis. There are examples of countries.

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Countries In the Asia-Pacific region experienced disasters before the onset of the COVID-19.

1. A week
2. Months
3. Years
4. Decades

Correct Answer :-

- Months

Topic:- MCA C

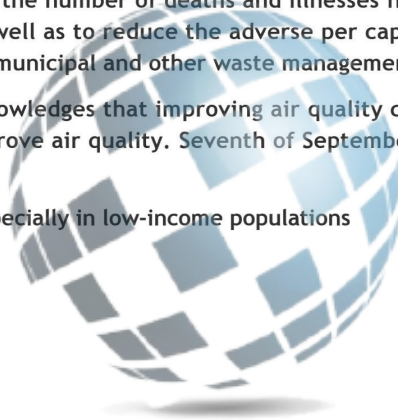
1) Air pollution is the single greatest environmental risk to living beings and one of the main causes of death and disease globally. Air pollution affects all but it disproportionately affects women, children and the elderly, especially in low-income populations as they are often exposed to high levels of ambient air pollution and indoor air pollution from cooking and heating with wood fuel and kerosene and also has a negative impact on ecosystems.

Some air pollutants, such as black carbon, methane, hydro- fluorocarbons and ground-level ozone, are also short-lived climate pollutants and are responsible for a significant portion of air pollution-related deaths, as well as impacts on crops and hence food security, so their reduction has co-benefits for the climate. The average atmospheric lifetime of a single black carbon soot particle is only two or three weeks. Methane has an atmospheric lifetime of 12 years. Ground-level ozone lasts only a few hours to a few days in the atmosphere. The average HFC lifespan, weighted by their respective emissions, is 15 years.

All countries need to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination by 2030, as well as to reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management by 2030.

Today, the international community acknowledges that improving air quality can enhance climate change mitigation and that climate change mitigation efforts can improve air quality. Seventh of September every year is designated as the International Day of Clean Air for blue skies.

Air pollution disproportionately affects...especially in low-income populations



1. Women only
2. Children only
3. Elderly only
4. women, children and the elderly

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Correct Answer :-

- women, children and the elderly

2) Air pollution is the single greatest environmental risk to living beings and one of the main causes of death and disease globally. Air pollution affects all but it disproportionately affects women, children and the elderly, especially in low-income populations as they are often exposed to high levels of ambient air pollution and indoor air pollution from cooking and heating with wood fuel and kerosene and also has a negative impact on ecosystems.

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Today, the international community acknowledges that improving air quality can enhance climate change mitigation and that climate change mitigation efforts can improve air quality. Seventh of September every year is designated as the International Day of Clean Air for blue skies.

Which of the following is false

1. Air pollution can cause food security.

2. Reducing short lived pollutants can improve the climate.
3. Adverse per capita environmental impact of cities is under control
4. Climate change mitigation efforts can improve air quality.

Correct Answer :-

- Adverse per capita environmental impact of cities is under control

3) Air pollution is the single greatest environmental risk to living beings and one of the main causes of death and disease globally. Air pollution affects all but it disproportionately affects women, children and the elderly, especially in low-income populations as they are often exposed to high levels of ambient air pollution and indoor air pollution from cooking and heating with wood fuel and kerosene and also has a negative impact on ecosystems.

Some air pollutants, such as black carbon, methane, hydro- fluorocarbons and ground-level ozone, are also short-lived climate pollutants and are responsible for a significant portion of air pollution-related deaths, as well as impacts on crops and hence food security, so their reduction has co-benefits for the climate. The average atmospheric lifetime of a single black carbon soot particle is only two or three weeks. Methane has an atmospheric lifetime of 12 years. Ground-level ozone lasts only a few hours to a few days in the atmosphere. The average HFC lifespan, weighted by their respective emissions, is 15 years.

All countries need to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination by 2030, as well as to reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management by 2030.

Today, the international community acknowledges that improving air quality can enhance climate change mitigation and that climate change mitigation efforts can improve air quality. Seventh of September every year is designated as the International Day of Clean Air for blue skies.

What is the full form of SLCP?

1. Short-Lived Climate Pollutants
2. Short-Lived Climate Pollution
3. Short-Lived Carbon Pollutants
4. Short-Life Climate Pollutants



Correct Answer :-

- Short-Lived Climate Pollutants

4) Air pollution is the single greatest environmental risk to living beings and one of the main causes of death and disease globally. Air pollution affects all but it disproportionately affects women, children and the elderly, especially in low-income populations as they are often exposed to high levels of ambient air pollution and indoor air pollution from cooking and heating with wood fuel and kerosene and also has a negative impact on ecosystems.

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International Day of Clean Air for blue skies' falls on ... every year.

1. 17th September
2. 7th September
3. 27th September

4. 30th September

Correct Answer :-

- 7th September

5) Air pollution is the single greatest environmental risk to living beings and one of the main causes of death and disease globally. Air pollution affects all but it disproportionately affects women, children and the elderly, especially in low-income populations as they are often exposed to high levels of ambient air pollution and indoor air pollution from cooking and heating with wood fuel and kerosene and also has a negative impact on ecosystems.

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Match List I with List II

List I	List II
A. Black Carbon	I. 12 YEARS
B. Methane	II. 15 YEARS
C. Hydro- Fluorocarbons	III. 2-3 WEEKS
D. Ground-Level Ozone	IV. FEW HOURS TO FEW DAYS



Choose the correct answer from the options given below

1. A - III, B - I, C - II, D - IV
2. A - II, B - III, C - IV, D - I
3. A - IV, B - II, C - III, D - I
4. A - I, B - IV, C - II, D - III

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Correct Answer :-

- A - III, B - I, C - II, D - IV

Topic:- MCA D

1) What is the floating point representation of 12.25?[Question ID = 11373]

1. 1100.01
2. 1100.11001
3. 1100.10
4. 1100.10011

Correct Answer :-

- 1100.01

2) Consider the following function:

```
void swap (int x, int y)
{
    int temp = x;
    x = y;
    y = temp;
}
```

The above function is invoked as follows:

```
int a = 3;
int b = 4;
```

swap(a, b);

What will be the values assigned to a and b on execution of the function call:
swap(a, b)?

1. a = 3, b = 3
2. a = 3, b = 4
3. a = 4, b = 3
4. a = 4, b = 4

Correct Answer :-

- a = 3, b = 4

3) The value of n in the following code segment is

```
int a[] = {1, 2, 3, 4};  
int i = 0, n;  
i++;  
n = a[++i];
```

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



Correct Answer :-

- 3

4) The following bit pattern denotes a negative integer in two's complement form.

1111111111111010

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What value does it represent?

1. -6
2. -4
3. -2
4. -1

Correct Answer :-

- -6