

# RBE SSC CGL Tier-2 Live Mock January 05,2026

Q. 1	<p>What is the area of the minor segment formed by a chord of a circle having radius 14 cm, if the angle subtended by the chord at the centre is <math>90^\circ</math>?</p> <p>a) <math>49\pi - 98</math> ✓</p> <p>b) <math>56\pi - 98</math> ✗</p> <p>c) <math>49\pi - 84</math> ✗</p> <p>d) <math>56\pi - 84</math> ✗</p>
<b>Explanation:</b>	<p>Area of minor segment = Area of sector – Area of triangle</p> $= \left(\frac{\theta}{360}\right) \times \pi r^2 - \left(\frac{1}{2}\right) \times r^2 \times \sin\theta$ $= \left(\frac{90}{360}\right) \times \pi \times 14^2 - \left(\frac{1}{2}\right) \times 14^2 \times \sin 90^\circ$ $= 49\pi - 98$

Q. 2

In a triangle PQR with sides 8 cm, 10 cm, and 12 cm, the angle bisector of the largest angle divides the opposite side into two segments. What is the length of the shorter segment?

- a)  $18/3$  cm X
- b)  $18/5$  cm X
- c)  $16/5$  cm X
- d)  $16/3$  cm ✓

Largest side = 12 cm  $\Rightarrow$  angle opposite it is the largest

By **Angle Bisector Theorem**:

Segments  $\propto$  adjacent sides

$\Rightarrow$  Shorter segment

$$= \frac{\text{smaller adjacent side}}{\text{sum of adjacent sides}} \times \text{opposite side}$$

**Explanation:**

$$= \left( \frac{8}{8+10} \right) \times 12$$

$$= \left( \frac{8}{18} \right) \times 12$$

$$= \frac{16}{3} \text{ cm}$$

Q. 3

When the radius of a sphere is increased by 20%, its surface area increases by  $484\pi \text{ cm}^2$ . Find the original radius of the sphere. (Take  $\pi = 22/7$ )

- a)  $5\sqrt{11} \text{ cm}$  ✓
- b)  $3\sqrt{9} \text{ cm}$  ✗
- c)  $4\sqrt{13} \text{ cm}$  ✗
- d) 25 cm ✗

**Explanation:**

Let radius = r

$$\begin{aligned}\text{Increase in surface area} \\ &= 4\pi[(1.2r)^2 - r^2] \\ &= 4\pi(0.44r^2) \\ &= 1.76\pi r^2\end{aligned}$$

Given:

$$1.76\pi r^2 = 484\pi$$

Cancel  $\pi$ :

$$1.76r^2 = 484$$

$$r^2 = 275$$

$$r = 5\sqrt{11} \text{ cm}$$

Q. 4

If  $4 \sin\theta = 3 \cos\theta$ , where  $0^\circ < \theta < 90^\circ$ , then find the value of  $(\tan^2\theta + \sec^2\theta - \operatorname{cosec}^2\theta)$ .

- a)  $-\frac{41}{72}$  X
- b)  $-\frac{47}{72}$  ✓
- c)  $-\frac{57}{72}$  X
- d)  $-\frac{51}{72}$  X

**Explanation:**

$$4 \sin\theta = 3 \cos\theta \\ \Rightarrow \tan\theta =$$

$$\tan^2\theta = \frac{9}{16}$$

$$\sec^2\theta = 1 + \tan^2\theta = \frac{25}{16}$$

$$\cot\theta = \Rightarrow \operatorname{cosec}^2\theta = 1 + \cot^2\theta = \frac{25}{9}$$

Required value

$$= \frac{9}{16} + \frac{25}{16} - \frac{25}{9}$$

$$= \frac{34}{16} - \frac{25}{9}$$

$$= -\frac{47}{72}$$

Q. 5

Let  $N = 2^7 \times 3^5 \times 5^3 \times 7^2$ . How many different natural numbers that are perfect squares and divisible by 900 can be formed using the factors of N?

- a) 30 X
- b) 18 X
- c) 24 X
- d) 12 ✓

**Explanation:**

$900 = 2^2 \times 3^2 \times 5^2$ , so minimum powers required:  
 $2 \geq 2, 3 \geq 2, 5 \geq 2$

For a **perfect square**, powers must be **even**.

**Possible even powers:**

2: from  $2^2$  to  $2^6 \rightarrow \{2, 4, 6\} \rightarrow 3$  choices

3: from  $3^2$  to  $3^4 \rightarrow \{2, 4\} \rightarrow 2$  choices

5: only  $5^2 \rightarrow 1$  choice

7: from  $7^0$  to  $7^2 \rightarrow \{0, 2\} \rightarrow 2$  choices

**Total numbers =  $3 \times 2 \times 1 \times 2 = 12$**

Q. 6

A sold an article at a 20% profit for ₹1800. He purchased another article whose cost price was the same as that of the first article. He sold this second article at a 10% loss. What is the overall profit or loss percentage of A?

- a) 5% ✓
- b) 10% X
- c) 15% X
- d) 20% X

**Explanation:**

Let CP of each article = 100

First article  $\rightarrow$  20% profit  $\rightarrow$  SP = 120

Second article  $\rightarrow$  10% loss  $\rightarrow$  SP = 90

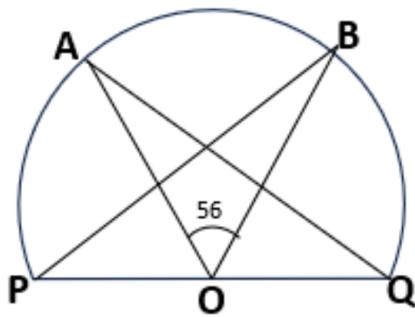
Total CP = 200

Total SP = 210

$$\text{Profit \%} = \frac{210 - 200}{200} \times 100 = 5\%$$

Q. 7

In the given figure, PQ is a diameter of the semicircle PABQ and O is its center.  $\angle AOB = 56^\circ$ . BP cuts AQ at X. What is the value (in degrees) of  $\angle AXP$ ?



- a)  $58^\circ$  X
- b)  $52^\circ$  X
- c)  $62^\circ$  ✓
- d)  $64^\circ$  X

**Explanation:**

PQ is a diameter.  
AP is joined.

$$\angle APB = \angle AOB = 28^\circ$$

Angle at the centre is double the angle formed at the circumference by the same chord in the same segment.

$$\angle PAQ = 90^\circ$$

(Angle formed in a semicircle is a right angle)

$$\begin{aligned}\angle AXP &= 180^\circ - (\angle APB + \angle PAQ) \\ &= 180^\circ - (28^\circ + 90^\circ) \\ &= 62^\circ\end{aligned}$$

Q. 8

For two positive numbers  $x$  and  $y$ , it is given that:  $x^2 + y^2 - xy = 27$  and  $x^3 - y^3 = 91(x - y)$ . Find the value of  $(x + y)$ .

a) 11

b) 13

c)  $\sqrt{119}$

d)  $\sqrt{123}$

$$x^2 + y^2 - xy = 27$$
$$x^3 - y^3 = 91(x - y)$$

Using identity

$$x^3 - y^3 = (x - y)(x^2 + xy + y^2)$$

So,

$$(x - y)(x^2 + xy + y^2) = 91(x - y)$$

$$x^2 + xy + y^2 = 91$$

Add both equations:

$$(x^2 + y^2 - xy) + (x^2 + y^2 + xy) = 27 + 91$$

$$2(x^2 + y^2) = 118$$

$$x^2 + y^2 = 59$$

$$xy = 91 - 59 = 32$$

$$(x + y)^2 = x^2 + y^2 + 2xy$$

$$(x + y)^2 = 59 + 64 = 123$$

$$x + y = \sqrt{123}$$

**Explanation:**

Q. 9

A spends 70% of his monthly income. If his monthly income increases by 20% and his monthly savings increase by 40%, then find the percentage increase in his monthly expenditure.

- a) 12.33% X
- b) 11.43% ✓
- c) 10.26% X
- d) 13.92% X

Income = 100  
Expenditure = 70  
Savings = 30

New income = 120  
New savings =  $30 \times 1.4 = 42$   
New expenditure =  $120 - 42 = 78$   
Increase =  $78 - 70 = 8$   
% increase =  $(8 / 70) \times 100 = 11.43\%$

**Explanation:**

Q. 10

A person borrowed a certain sum at 5% p.a. for two years, interest being compounded annually. At the end of the first year, he paid ₹5,330, and at the end of the second year, he paid ₹6,090 and he cleared all his debt. Find the amount which he borrowed.

- a) ₹11,200 X
- b) ₹9,900 X
- c) ₹10,200 X
- d) ₹10,600 ✓

\* Let the amount is  $n$

$$\left[ \left( n \times \frac{105}{100} \right) - 5330 \right] \times \frac{105}{100} = 6090$$

$$n \times \frac{105}{100} - 5330 = 5000$$

$$n \times \frac{105}{100} = 11130$$

$$n = 10,600$$

Explanation:

Q. 11

If  $a$ ,  $b$  and  $c$  are positive numbers such that  $(a^2 + b^2) : (b^2 + c^2) : (c^2 + a^2) = 13 : 25 : 20$ , then  $a : b : c = ?$

- a)  $2 : 3 : 4$  ✓
- b)  $3 : 4 : 5$  ✗
- c)  $2 : 4 : 5$  ✗
- d)  $3 : 5 : 4$  ✗

$$\begin{array}{rcl} a^2 + b^2 &=& 13 \\ b^2 + c^2 &=& 25 \\ c^2 + a^2 &=& 20 \\ \hline a^2 + b^2 + c^2 &=& 29 \end{array}$$

Explanation:

$$\begin{aligned} c^2 &= 16, c = 4 \\ a^2 &= 4, a = 2 \\ b^2 &= 9, b = 3 \\ a : b : c &= 2 : 3 : 4 \end{aligned}$$

Q. 12

If  $1 + \tan \theta = \sqrt{5}$  then find the value of  $\sqrt{5} \cot \theta - 1 = \underline{\hspace{2cm}}$ ?

a)  $\frac{\sqrt{5} - 1}{4}$  X

b)  $\frac{2\sqrt{5} - 1}{4}$  X

c)  $\frac{\sqrt{5} + 1}{4}$  ✓

d)  $\frac{2\sqrt{5} + 1}{4}$  X

$$1 + \tan \theta = \sqrt{5}$$

$$\tan \theta = \sqrt{5} - 1$$

$$\cot \theta = \frac{1}{\sqrt{5}-1}$$

Rationalise:

$$\cot \theta = \frac{\sqrt{5}+1}{4}$$

**Explanation:**

$$\text{Now, } \sqrt{5} \cot \theta - 1$$

$$= \sqrt{5} \times \frac{\sqrt{5}+1}{4} - 1$$

$$= \frac{5+\sqrt{5}}{4} - 1$$

$$= \frac{1+\sqrt{5}}{4}$$

Q. 13

A right circular cone of maximum possible volume is cut out from a solid hemisphere of radius 14 cm. What percentage of the volume of the hemisphere is removed?

- a)  $33\frac{1}{3}\%$  X
- b) 50% ✓
- c) 25% X
- d)  $66\frac{2}{3}\%$  X

**Explanation:**

For maximum volume, cone inside a hemisphere has  
radius = r and height = r

Volume ratio  
= Cone : Hemisphere

$$= \left(\frac{1}{3}\right) \pi r^3 : \left(\frac{2}{3}\right) \pi r^3$$
$$= 1 : 2$$

Required percentage

$$= \left(\frac{1}{2}\right) \times 100$$
$$= 50\%$$

Q. 14

If  $P = 3^2 + 7^2 + 11^2 + 15^2 + \dots + 99^2$  and  $Q = 1^2 + 5^2 + 9^2 + 13^2 + \dots + 97^2$  then find the value of  $(P - Q)$ .

- a) 4800 X
- b) 4900 X
- c) 5000 ✓
- d) 5100 X

For corresponding terms,

$$(3^2 - 1^2) + (7^2 - 5^2) + (11^2 - 9^2) + \dots + (99^2 - 97^2)$$

Use identity:

$$a^2 - b^2 = (a - b)(a + b)$$

Here, difference = 2 for every pair.

So,

$$P - Q = 2[(3+1) + (7+5) + (11+9) + \dots + (99+97)]$$

$$= 2[4 + 12 + 20 + \dots + 196]$$

This is an AP with

$$a = 4, d = 8, n = 25$$

$$\text{Sum} = [2a + (n-1)d]$$

$$= \frac{25}{2} [8 + 192]$$

$$= \frac{25}{2} \times 200$$

$$= 2500$$

$$P - Q = 2 \times 2500 = 5000$$

**Explanation:**

Q. 15

A ladder leans against a smooth vertical wall and makes an angle  $\theta$  with the ground such that  $\sin \theta = 5/13$ . If the difference between the length of the ladder and the distance of its foot from the wall is 3 m, then what is the length of the ladder (in m)?

- a) 26 m X
- b) 24 m X
- c) 33 m X
- d) 39 m ✓

**Explanation:**

$$\sin \theta = \frac{5}{13}$$
$$\Rightarrow \text{Triangle ratio} = 5 : 12 : 13$$

Let ladder length =  $13k$   
Distance from wall =  $12k$

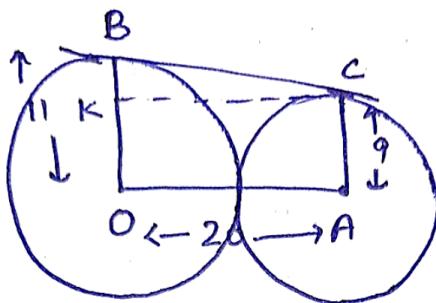
Given difference = 3 m  
 $\Rightarrow 13k - 12k = 3$   
 $\Rightarrow k = 3$

Ladder length =  $13 \times 3 = 39 \text{ m}$

Q. 16

There are two circles which touch each other externally. The radius of the first circle with center O is 11 cm and the radius of the second circle with center A is 9 cm. BC is the common tangent to these two circles, where B and C are points on the circles with centers O and A respectively. What is the length of BC?

- a)  $6\sqrt{11}$  cm ✓
- b)  $6\sqrt{13}$  cm ✗
- c)  $4\sqrt{11}$  cm ✗
- d)  $4\sqrt{13}$  cm ✗



$$OA = 11 + 9 = 20 \text{ cm}$$

$$KB = 11 - 9 = 2 \text{ cm}$$

$$OA = KC$$

Now Applying pythagoras  
theorem in  $\triangle BKC$

$$\begin{aligned} BC &= \sqrt{(20)^2 - (2)^2} \\ &= \sqrt{400 - 4} \\ &= \sqrt{396} \\ &= 6\sqrt{11} \text{ cm} \end{aligned}$$

Explanation:

Q. 17

A shopkeeper has 40 articles, each having the same cost price. He marks the price of each article at 25% above its cost price. He sells 20 articles at a discount of 10% each and the remaining 20 articles at a discount of 20% each, thereby gaining a total profit of ₹500. What is the cost price of each article?

- a) 125 X
- b) 200 ✓
- c) 175 X
- d) 225 X

\*

Let  $CP = 100$  then  $SP = 125$

$$\begin{array}{r} 20 \\ \left[ 125 \times \frac{90}{100} \right] \\ = 112.5 \\ \hline 20 \times 112.5 \end{array} \quad \begin{array}{r} 20 \\ \left[ 125 \times \frac{80}{100} \right] \\ = 100 \\ \hline 20 \times 100 \end{array}$$

$$\begin{array}{r} 2250 \\ 2000 \\ \hline 4250 \\ \text{Total } CP = 40 \times 100 \\ = 4000 \end{array}$$

$$\text{Profit, } 250 \xrightarrow{\times 2} 500$$

$$\text{Then } CP = 100 \times 2 = 200 \text{ ₹}$$

Explanation:

Q. 18

A certain deposit earns 6% per annum. If the interest is compounded annually, the interest for the first year is ₹180. How much extra interest is earned in the second year due to compounding compared to simple interest?

- a) ₹11.20 ✗
- b) ₹10.60 ✗
- c) ₹10.80 ✓
- d) ₹11.40 ✗

Given: 6% p.a., 1st year interest = ₹180

$$\Rightarrow \text{Principal} = \frac{180 \times 100}{6} = ₹3000$$

$$\text{Amount after 1st year} = 3000 + 180 = ₹3180$$

$$\text{2nd year interest (on ₹3180)} = 6\% \text{ of } 3180 = ₹190.80$$

$$\text{Interest if it were simple (same as 1st year)} = ₹180$$

$$\begin{aligned}\text{Additional interest in 2nd year due to compounding} \\ &= 190.80 - 180 = ₹10.80\end{aligned}$$

Explanation:

Q. 19

The price of a laptop decreased by 8%, 12%, and 10% during the first three years. What will be the price of the laptop after three years if its initial value was ₹10,000 (in integer value)?

- a) 7,123 ✗
- b) 7,286 ✓
- c) 7,325 ✗
- d) 7,542 ✗

Explanation:

Initial price = 10000

Successive decreases:

8% → multiply by 0.92

12% → multiply by 0.88

10% → multiply by 0.90

$$\begin{aligned}\text{So, Final price} &= 10000 \times 0.92 \times 0.88 \times 0.90 \\ &= 7286\end{aligned}$$

Q. 20

The value of  $\frac{a^{\frac{2}{3}} - 3a^{\frac{1}{3}} + 3a - 8}{a^{\frac{1}{3}} - 2} + 1$  when  $a = 27$ , is.

- a) 73 X
- b) 72 X
- c) 74 ✓
- d) 71 X

Given

$$\frac{a^{\frac{2}{3}} - 3a^{\frac{1}{3}} + 3a - 8}{a^{\frac{1}{3}} - 2} + 1$$

Put

$$a^{\frac{1}{3}} = t$$

Then

$$a^{\frac{2}{3}} = t^2 \text{ and } a = t^3$$

**Explanation:**

Expression becomes

$$\frac{t^2 - 3t + 3t^3 - 8}{t - 2} + 1$$

For  $a = 27 \Rightarrow t = 3$

$$\frac{9 - 9 + 81 - 8}{1} + 1$$

$$= 73 + 1 = 74$$

Q. 21

Rohit started a business with an investment of ₹4,00,000 in January 2021. After 5 months, Amit joined him with an investment of ₹3,00,000. After another 4 months, Sumit joined the business with an investment equal to that of Rohit. If the total profit earned in 3 years from the date Rohit started the business is ₹1,93,200, then how much profit will Rohit get?

- a) ₹80,240 X
- b) ₹80,640 ✓
- c) ₹81,140 X
- d) ₹81,440 X

Total time = 3 years = 36 months

Time periods:

- Rohit = 36 months
- Amit =  $36 - 5 = 31$  months
- Sumit =  $36 - 9 = 27$  months

Capital  $\times$  Time:

- Rohit =  $4 \times 36 = 144$
- Amit =  $3 \times 31 = 93$
- Sumit =  $4 \times 27 = 108$

Ratio =  $144 : 93 : 108 = 48 : 31 : 36$

Total parts = 115

Rohit's profit

$$\begin{aligned} &= \left( \frac{48}{115} \right) \times 1,93,200 \\ &= ₹80,640 \end{aligned}$$

Explanation:

Q. 22

The ratios of alcohol to water in solutions A and B are 1 : 2 and 3 : 2, respectively. Solutions A and B are mixed in the ratio 2 : 3. In 300 ml of the resulting solution, how much water (in ml) should be added so that the ratio of alcohol to water becomes 2 : 5?

- a) 218 ml ✓
- b) 236 ml ✗
- c) 204 ml ✗
- d) 210 ml ✗

$$\begin{array}{rcl} & \text{A} & \text{W} \\ \text{A} & (1 : 2) \times 5 \times 2 \\ \text{B} & (3 : 2) \times 3 \times 3 \\ \hline & 10 : 20 \\ & 27 : 18 \\ \hline & 37 : 38 \end{array}$$

Now become the ratio  
2 : 5 after add some  
water.

$$\begin{array}{rcl} & \text{A} & \text{W} \\ (37 : 38) \times 2 & & \\ \hline (2 : 5) \times 37 & & \\ \hline 74 : 76 & & )_{109} \\ 74 : 185 & & \\ (74+76) \xrightarrow{\times 2} 300 & & \\ 109 \longrightarrow 218 \text{ ml.} & & \end{array}$$

Explanation:

Q. 23

Simplify:

$$\left\{ \left( \frac{3}{4} \text{ of } 128 \right) \div [2 + \{5 - (18 \div 6)\}] \right\} \times (7 + 3^2) \\ - \left\{ 168 \div \left( 4 - \frac{8}{16} \right) \right\}$$

- a) 316 X
- b) 336 ✓
- c) 356 X
- d) 348 X

$$\left\{ 96 \div 4 \right\} \times 16 - \left\{ 168 \times \frac{2}{7} \right\}$$

$$24 \times 16 - 48$$

$$384 - 48$$

$$= 336$$

Explanation:

Q. 24

A 4-digit number '45PQ' is divisible by 3, 5 and 7. Find the value of P + Q.

- a) 6 ✓
- b) 7 X
- c) 8 X
- d) 9 X

Number 45PQ must be divisible by 5, so Q = 0 or 5.

It must also be divisible by 105 (LCM of 3,5,7).

The only multiple of 105 between 4500–4599 is 4515.

So, P = 1, Q = 5 → P + Q = 6.

Explanation:

Q. 25

Calculate the coefficient of mean deviation from Mode for the following data:

40, 45, 50, 50, 55, 60, 65

- a) 0.12 ✓
- b) 0.17 ✗
- c) 0.21 ✗
- d) 0.09 ✗

$$\text{Mode} = 50$$

$$\begin{aligned}\Sigma|x - \text{Mode}| \\= 10 + 5 + 0 + 0 + 5 + 10 + 15 \\= 45\end{aligned}$$

Explanation:

$$\text{Mean Deviation} = 45 \div 7 = 6.43$$

Coefficient of MD from Mode

$$\begin{aligned}= 6.43 \div 50 \\= \approx 0.12\end{aligned}$$

Q. 26

A man divided his journey into three parts of distances of 18 km, 20 km and 27 km. He travelled these distances at the speeds of 6 km/h, 5 km/h and 9 km/h respectively. What was his average speed during the entire journey?

- a) 7.5 km/h ✗
- b) 5.5 km/h ✗
- c) 6.5 km/h ✓
- d) 4.5 km/h ✗

$$\text{Time taken in the first part of the journey} = 18 / 6 = 3 \text{ h}$$

$$\text{Time taken in the second part} = 20 / 5 = 4 \text{ h}$$

$$\text{Time taken in the third part} = 27 / 9 = 3 \text{ h}$$

Explanation:

Average speed = Total distance / Total time

$$\begin{aligned}= (18 + 20 + 27) / (3 + 4 + 3) \\= 65 / 10 \\= 6.5 \text{ km/h}\end{aligned}$$

Q. 27

Find the simplified value:

$$\left[ 1\frac{1}{5} \text{ of } \left\{ \frac{3}{7} - \left( 1\frac{4}{15} - \frac{13}{15} \right) \times \frac{5}{7} \right\} \right] \div \left( \frac{6}{7} \div 5 \right)$$

a)  $\frac{7}{12}$  X

b)  $\frac{5}{12}$  X

c)  $\frac{1}{12}$  X

d) 1 ✓

Explanation:

$$\begin{aligned}
 & \left[ \frac{6}{5} \times \left\{ \frac{3}{7} - \left( \frac{19}{15} - \frac{13}{15} \right) \times \frac{5}{7} \right\} \right] \div \frac{6}{7 \times 5} \\
 &= \left[ \frac{6}{5} \times \left\{ \frac{3}{7} - \frac{6}{15} \times \frac{5}{7} \right\} \right] \div \frac{6}{35} \\
 &= \left[ \frac{6}{5} \times \left\{ \frac{3}{7} - \frac{2}{7} \right\} \right] \div \frac{6}{35} \\
 &= \left[ \frac{6}{5} \times \frac{1}{7} \right] \div \frac{6}{35} \\
 &= \frac{6}{35} \times \frac{35}{6} = 1
 \end{aligned}$$

Q. 28

A box contains 8 red, 6 blue, and 4 green balls. Four balls are drawn at random without replacement. Find the probability that exactly 2 balls are red and 1 is blue and 1 is green.

a)  $\frac{51}{255}$  X

b)  $\frac{43}{255}$  X

c)  $\frac{56}{255}$  ✓

d)  $\frac{67}{255}$  X

Total balls =  $8R + 6B + 4G = 18$

**Total ways**

$$= 18C4 = 3060$$

**Favourable cases**

Exactly 2 red and remaining 2 of different colours  
→ 2R, 1B, 1G

**Ways**

$$\begin{aligned} &= 8C2 \times 6C1 \times 4C1 \\ &= 28 \times 6 \times 4 \\ &= 672 \end{aligned}$$

**Probability**

$$= \frac{672}{3060}$$

$$= \frac{56}{255}$$

**Explanation:**

Q. 29

A can do a piece of work in 20 days, while B can do the same work in 30 days. They started the work together. After 5 days, C joined them, and all three completed the remaining work in 5 more days. If the total wages for the work were ₹660, what is the share of C?

- a) ₹220 X
- b) ₹110 ✓
- c) ₹330 X
- d) ₹190 X

$$\begin{array}{l} * \quad A \rightarrow 20 \quad 3 \\ \quad \quad B \rightarrow 30 \quad 2 \\ \quad \quad \quad \sum 60 \end{array}$$

$$(A+B) \times 5 = 5 \times 5 \\ = 25$$

$$\text{Remaining work} = 60 - 25 \\ = 35$$

Now,

$$\frac{35}{5+C} = 5 \\ C = 2$$

$$\text{So, } A = 3 \times 10 = 3$$

$$B = 2 \times 10 = 2$$

$$C = 2 \times 8 = 1$$

$$6 \rightarrow 660 \\ \times 110$$

$$\therefore 1 \rightarrow 110$$

$$\text{Share of } C = 110 \text{ ₹}$$

Explanation:

Q. 30

A botanist is studying the average height and sample standard deviation of a newly developed plant species. The following data represent the heights (in cm) of a sample of 8 plants. 8, 10, 12, 14, 16, 10, 12, 14. The mean height of the plants is 12 cm. Find the sample standard deviation, correct to two decimal places.

- a) 1.23 X
- b) 1.69 X
- c) 2.62 ✓
- d) 3.01 X

$$\text{Mean} = 12, n = 8$$

$$\begin{aligned}\Sigma(x - \bar{x})^2 \\ = (-4)^2 + (-2)^2 + 0^2 + 2^2 + 4^2 + (-2)^2 + 0^2 + 2^2 \\ = 48\end{aligned}$$

Sample SD

**Explanation:**

$$\begin{aligned}&= \sqrt{[48 \div (8 - 1)]} \\ &= \sqrt{\frac{48}{7}} \\ &\approx 2.62\end{aligned}$$

Q. 31

Each item describes a situation and is followed by four possible responses. Indicate the one response that you find most appropriate. Choose only one response for the situation. The responses will be evaluated based on the level of appropriateness for the given situation.

**Situation**

A school administration has to decide whether to conduct exams immediately despite incomplete syllabus coverage or postpone the exams to ensure fair preparation for students. What should be the most appropriate decision?

- a) Conduct exams immediately to maintain the academic calendar X
- b) Cancel the exams completely X
- c) Postpone the exams and ensure adequate preparation time ✓
- d) Conduct exams for only selected classes X

**Explanation:**

- The priority should be **students' fair preparation and learning quality**.
- Conducting exams with an incomplete syllabus may lead to **unfair evaluation**.
- Postponing exams ensures **equity, preparedness, and better outcomes**.

Q. 32

Read the following statement carefully and identify the inference(s) that follow.

**Statement**

The government has announced a complete ban on the use of plastic bags in major cities to protect the environment.

**Inferences**

- I. The government is trying to reduce environmental pollution.
- II. The ban may encourage people to use eco-friendly alternatives.
- III. Plastic bags will no longer be manufactured anywhere in the country.

a) If only I follows

b) If only I and II follow

c) If only II and III follow

d) If all I, II and III follow

**Explanation:**

- Inference I follows because banning plastic bags directly aims at **reducing pollution**.
- Inference II follows as a ban generally leads people to shift towards alternatives like **cloth or paper bags**.
- Inference III **does not follow** because the statement mentions a ban **only in major cities**, not a nationwide manufacturing ban.

Q. 33

Few letters are given followed by a question mark (?). The letters are following a specific pattern.

You have to choose the option which can replace the question mark.

Z, U, O, J, ?

a) E

b) D

c) F

d) G

**Explanation:**

- Positions: Z(26), U(21), O(15), J(10)
- Pattern:  $-5, -6, -5, -6$
- Next:  $10 - 6 = 4 \rightarrow D$

Q. 34

Find the next element that replaces the question mark (?) logically.

12, 36, 84, 180, ?

- a) 388 X
- b) 372 ✓
- c) 360 X
- d) 340 X

Explanation:

- Find the differences:
  - $36 - 12 = 24$
  - $84 - 36 = 48$
  - $180 - 84 = 96$
- The differences are **doubling**:  
**24, 48, 96 → next = 192**
- Next term =  $180 + 192 = 372$

Q. 35

Find the next element that replaces the question mark (?) logically.

14, 34, 74, 154, ?

- a) 324 X
- b) 314 ✓
- c) 308 X
- d) 316 X

Explanation:

Differences:

- $34 - 14 = 20$
- $74 - 34 = 40$
- $154 - 74 = 80$

Differences are **doubling**:

**20, 40, 80 → next = 160**

Next term =  $154 + 160 = 314$

Q. 36

In each of the following questions, there is a certain relationship between two given numbers on one side of (::) and one number is given on the other side of (::). Another number is to be found from the given alternatives, having the same relationship with this number as the numbers of the given pair bear.

$$8 : 5 :: 12 : ?$$

- a) 7 ✓  
b) 8 ✗  
c) 11 ✗  
d) 10 ✗

Explanation:

- Look at the relationship in the first pair:
  - $8 \rightarrow (8 \div 2) + 1 = 4 + 1 = 5$
- Apply the same logic to 12:
  - $12 \div 2 + 1 = 6 + 1 = 7$

Q. 37

Which of the following is the odd one out based on origin?

- a) Rivers ✗  
b) Glaciers ✗  
c) Canals ✓  
d) Springs ✗

Explanation:

- Rivers → natural origin
- Glaciers → natural origin
- Springs → natural origin
- Canals → man-made (artificial) origin

So, Canals do not belong to the group.

Q. 38

In the question below, there are three statements followed by two conclusions I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the statements.

**Statements**

All Doctors are Educated.

Some Educated are Athletes.

No Athlete is Lazy.

**Conclusions**

I. Some Doctors are not Lazy.

II. Some Athletes are Educated.

a) Only conclusion I follows



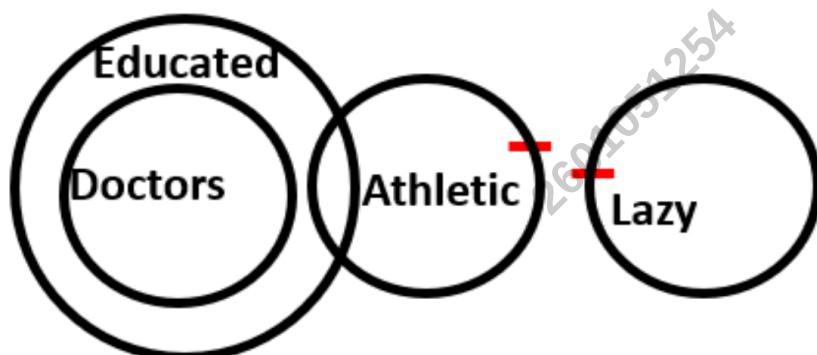
b) Only conclusion II follows



c) Both conclusions I and II follow



d) Neither conclusion I nor II follows



**Conclusion I: Some Doctors are not Lazy.**

- Explanation:**
- From Statement 1, Doctors are Educated.
  - From Statement 2, some Educated people are Athletes.
  - But it is **not given** that those Educated Athletes are Doctors.
  - There is **no direct connection** between Doctors and Athletes in the statements.

Since we **cannot be sure** that any Doctor is an Athlete, we **cannot apply** the rule "No Athlete is Lazy" to Doctors.

**Therefore, Conclusion I does NOT follow.**

**Conclusion II: Some Athletes are Educated.**

- Statement 2 directly says: **Some Educated people are Athletes.**
- This can be logically converted to: **Some Athletes are Educated.**

**Therefore, Conclusion II follows.**

Q. 39

In the following question, select the related word from the given alternatives.

Joule : Energy :: Kelvin : ?

- a) Heat X
- b) Pressure X
- c) Temperature ✓
- d) Force X

Explanation:

- Joule is the unit of Energy
- Similarly, Kelvin is the unit of Temperature

Q. 40

Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

D F H, H J L, L N P, P R T, ?

- a) S U W X
- b) R T V X
- c) T V X ✓
- d) U W Y X

Explanation:

Position-wise pattern (+4):

- 1st letters: D → H → L → P → T
- 2nd letters: F → J → N → R → V
- 3rd letters: H → L → P → T → X

Required letter-cluster: T V X

Q. 41

What comes next in the following series?

5, 11, 10, 17, 15, 23, ?

- a) 18
- b) 19
- c) 20
- d) 21

Explanation:

Split the series into two alternate series:

- 1st, 3rd, 5th terms: 5, 10, 15 → increase by +5
- 2nd, 4th, 6th terms: 11, 17, 23 → increase by +6

The next term is the 7th term, so it follows the first series:

$$15 + 5 = 20$$

Q. 42

Each of the letters in the word COMPLETE is arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter that is second from the left and the one that is fourth from the right in the new letter-cluster formed?

- a) 6
- b) 7
- c) 8
- d) 9

Explanation:

Arrange the letters of COMPLETE in alphabetical order:

C E E L M O P T

1. Second from the left = E
2. Fourth from the right = M
3. Alphabetical positions:
  - E = 5
  - M = 13
4. Letters between E and M =  $13 - 5 - 1 = 7$

Q. 43

Which of the following addresses are identical to each other?

1. Rohit Sharma B-203, Crystal Heights, Jaipur, 302019
2. Rohit Sharma B-203, Crystal Height, Jaipur, 302019
3. Rohit S. B-203, Crystal Heights, Jaipur, 302019
4. Rohit Sharma B-203, Crystal Heights, Jaipur, 302019

- a) 1 and 2
- b) 1 and 3
- c) 2 and 4
- d) 1 and 4

**Explanation:**

Address **1** and **4** are **exactly the same** in name, flat number, building name, city, and PIN.

Q. 44

Instruction: Identify the assumptions that must hold for the statement to be valid, then choose the correct option.

Statement:

The rapid growth of renewable energy projects can significantly reduce carbon emissions, but issues related to storage capacity and grid integration still limit their full effectiveness.

Assumptions:

- I. Renewable energy sources help in reducing carbon emissions.
- II. Present storage technology is not sufficient to support renewable energy at all times.
- III. Grid infrastructure needs improvement to handle renewable energy efficiently.

- a) Only I is implicit X
- b) Only II is implicit X
- c) Only I and II are implicit X
- d) I, II and III are implicit ✓

Explanation:

- **Assumption I is implicit** because the statement says renewable energy growth can *reduce carbon emissions*. This presumes renewables help in lowering emissions.
- **Assumption II is implicit** because the statement mentions that *storage capacity issues* limit effectiveness, which assumes present storage technology is insufficient at all times.
- **Assumption III is implicit** because *grid integration issues* are stated as a limitation, implying that current grid infrastructure needs improvement to efficiently handle renewable energy.

Since **all three assumptions are necessary for the statement to hold true**, the correct answer is: **Only I, II and III are implicit**

Q. 45

Each of the letters in the word JOURNEY is arranged in alphabetical order. How many letters are there in the English alphabetical series between the letter that is second from the left and the letter that is third from the right in the new letter-cluster formed?

- a) 7 ✓
- b) 8 ✗
- c) 9 ✗
- d) 10 ✗

Explanation:

- Alphabetical order of JOURNEY → E J N O R U Y
- Second from left → J
- Third from right → R
- Alphabets between J (10) and R (18)
- $= 18 - 10 - 1 = 7$

Q. 46

Find the best option that best completes the analogy.

LMN : OPQ :: ABC : ?

- a) DEF ✓
- b) BCD ✗
- c) CDE ✗
- d) EFG ✗

Explanation:

- LMN → OPQ
  - L → O (+3)
  - M → P (+3)
  - N → Q (+3)
- Same logic apply on ABC
  - A → D (+3)
  - B → E (+3)
  - C → F (+3)

Q. 47

In each of the following questions, the second word is formed by rearranging the letters of the first word according to a specific pattern. Identify that pattern and apply the same to the third word to find the correct answer.

MACHINE : ENIHCAM :: TEACHER : ?

a) REHCAET



b) ERHCAET



c) REHCETA



d) ERHCATE



Explanation:

- MACHINE → ENIHCAM
  - Pattern: Reverse the entire word
- Apply same pattern on TEACHER
  - Reverse → REHCAET

Q. 48

One number is not like the others:

1728, 2197, 2744, 4096

a) 1728



b) 2197



c) 2744



d) 4096



Explanation:

- $1728 = 12^3 \rightarrow$  cube of an **even** number
- $2197 = 13^3 \rightarrow$  cube of an **odd** number
- $2744 = 14^3 \rightarrow$  cube of an **even** number
- $4096 = 16^3 \rightarrow$  cube of an **even** number

👉 Except the 2nd number (2197), all are cubes of even numbers.

Q. 49

Read the below statements marked as Assertion (A) and Reason (R). Mark the correct option:

**Assertion (A):** Fatehpur Sikri was built mainly during the reign of Akbar and served as the Mughal capital for a short period.

**Reason (R):** It was abandoned primarily due to acute water scarcity in the region.

a) Both A and R are true, and R is the correct explanation of A.

b) Both A and R are true, but R is not the correct explanation of A.

c) A is true, but R is false.

d) A is false, but R is true.

**Explanation:**

- **A is true:** Fatehpur Sikri was constructed by Akbar and functioned briefly as the capital.

- **R is true:** Water scarcity was a major reason for its abandonment, which explains why the capital shifted.

Q. 50

**Instruction:** Identify the assumptions that must hold for the statement to be valid, then choose the correct option.

**Statement:**

As artificial intelligence becomes more widespread, it is important to create clear regulations to ensure transparency and accountability in its use.

**Assumptions:**

- I. Artificial intelligence systems can impact society in significant ways.
- II. Existing regulations are not fully adequate to govern AI technologies.
- III. Artificial intelligence will completely eliminate the need for human decision-making.

a) All are implicit

b) Only I is implicit

c) Only II and III are implicit

d) Only I and II are implicit

**Explanation:**

Only I and II are implicit

- **Assumption I is implicit** because regulation is needed only if AI has a significant societal impact.
- **Assumption II is implicit** as the statement stresses the need to *create clear regulations*, implying current ones are insufficient.
- **Assumption III is not implicit** because the statement does not claim that AI will completely replace human decision-making.

Q. 51

How many letters are there in "EDUCATION" between the first vowel and the last consonant?

- a) 3 X
- b) 5 X
- c) 7 ✓
- d) 6 X

Explanation:

- Word: E D U C A T I O N
- First vowel → E (1st position)
- Last consonant → N (last position)
- Letters between E and N = D U C A T I O
- Count = 7

Q. 52

How many meaningful four-letter English words can be formed using the first, second, fourth, and sixth letters of the word "SILENT" (when counted from left to right), using each letter only once in each word?

- a) 1 X
- b) 2 ✓
- c) 3 X
- d) 4 X

Explanation:

- Word: S I L E N T
- Required letters (1st, 2nd, 4th, 6th): S, I, E, T
- Meaningful four-letter words formed:
  - SITE
  - TIES

👉 Total meaningful words = 2

Q. 53

In a row, Rohit is 14th from the left and Mohit is 18th from the right. After they interchange their positions, Rohit becomes 20th from the left. What is the total number of persons in the row?

- a) 36 X
- b) 37 ✓
- c) 35 X
- d) 38 X

Explanation:

Explanation:

- After interchange, Rohit occupies Mohit's original position.
- So Mohit's position from left = 20.
- Given Mohit was 18th from the right.

$$\begin{aligned}\text{Total persons} &= (\text{position from left}) + (\text{position from right}) - 1 \\ &= 20 + 18 - 1 = 37\end{aligned}$$

Q. 54

In each of the following questions, a group of three numbers/symbols is given in each option. Identify the group that does NOT follow the same pattern as the others.

- a) A2\$ : B3# : C4@ X
- b) D5% : E6^ : F7& X
- c) G8\* : H9( : I10) X
- d) J11\_ : K12@ : L14# ✓

Explanation:

Common Pattern (Option a, b, c):

- Letters → consecutive (+1)
- Numbers → consecutive (+1)
- Each term has a symbol

In option (d), the numbers 11 → 12 → 14 are **not consecutive**, while in all other options the numbers increase by +1.

<p><b>Q. 55</b></p> <p>Introducing a man, Neha said, "He is the brother of the daughter of the only son of my father." How is the man related to Neha?</p> <p>a) Son <span style="color: red;">X</span></p> <p>b) Brother <span style="color: red;">X</span></p> <p>c) Nephew <span style="color: green;">✓</span></p> <p>d) Cousin <span style="color: red;">X</span></p>
<p><b>Explanation:</b></p> <p>Only son of my father = Neha's brother  Daughter of that son = Neha's niece  Brother of that daughter = <b>Neha's nephew</b></p> <p><b>Answer:</b> The man is Neha's <b>nephew</b></p>

<p><b>Q. 56</b></p> <p>If '+ means '×', '-' means '÷', '×' means '+' and '÷' means '−', then which of the following equations is CORRECT?</p> <p>a) <math>36 \div 6 + 8 - 4 \times 2 = 40</math> <span style="color: red;">X</span></p> <p>b) <math>36 \div 6 + 8 - 4 \times 2 = 20</math> <span style="color: red;">X</span></p> <p>c) <math>36 \div 6 + 8 - 4 \times 2 = 18</math> <span style="color: red;">X</span></p> <p>d) <math>36 \div 6 + 8 - 4 \times 2 = 26</math> <span style="color: green;">✓</span></p>
<p><b>Explanation:</b></p> <p>Given meanings:</p> <ul style="list-style-type: none"> <li>• <math>+ \rightarrow \times</math></li> <li>• <math>- \rightarrow \div</math></li> <li>• <math>\times \rightarrow +</math></li> <li>• <math>\div \rightarrow -</math></li> </ul> <p>Expression:  <math>36 \div 6 + 8 - 4 \times 2</math></p> <p>After replacing symbols:  <math>36 - 6 \times 8 \div 4 + 2</math></p> <p>Now solve (BODMAS):</p> <ul style="list-style-type: none"> <li>• <math>6 \times 8 = 48</math></li> <li>• <math>48 \div 4 = 12</math></li> <li>• <math>36 - 12 + 2 = 26</math></li> </ul> <p>Hence, the <b>correct equation is option (d)</b>.</p>

Q. 57

If  $7 @ 4 = 31$  and  $5 @ 3 = 17$ , then  $6 @ 2 = ?$

- a) 36 X
- b) 16 ✓
- c) 18 X
- d) 20 X

**Logic:**

Multiply the two numbers and **add their difference**

$$a@b = (a \times b) + (a - b)$$

**Check:**

**Explanation:**

- $7 @ 4 = 28 + 3 = 31$
- $5 @ 3 = 15 + 2 = 17$

**Apply:**

- $6 @ 2 = 12 + 4 = 16$

Q. 58

In a code language,  
“ child likes milk” is coded as “da mi la”  
“ child likes fruit” is coded as “da mi tu”  
“ man likes milk” is coded as “ra mi la”  
Question: What is the code for “ man likes fruit”?

- a) ra mi tu ✓
- b) da ra tu ✗
- c) ra la tu ✗
- d) mi ra tu ✗

Explanation:

- Common in first two sentences: **child, likes** → common code **da, mi**
- From 1st sentence: remaining
  - **milk** → **la**
- From 2nd sentence: remaining
  - **fruit** → **tu**
- From 3rd sentence: remaining
  - **man** → **ra**
- **Likes** appear in all sentence and **mi** appear in all codes therefore code for **likes** is **mi**.

👉 “ man likes fruit” = **ra mi tu**

Q. 59

In the following questions, the symbols @, #, \$, ©, % are used with the following meanings:

$$P @ Q \Rightarrow P \geq Q$$

$$P \# Q \Rightarrow P \leq Q$$

$$P \$ Q \Rightarrow P < Q$$

$$P © Q \Rightarrow P > Q$$

$$P \% Q \Rightarrow P = Q$$

Statements:

$$A © B$$

$$B \# C$$

Conclusions:

I.  $A © C$

II.  $A @ C$

Which of the conclusions follow?

a) Only I follows X

b) Only II follows X

c) Both I and II follow X

d) Neither I nor II follows ✓

Explanation:

Explanation:

- From  $A © B \Rightarrow A > B$
- From  $B \# C \Rightarrow B \leq C$

So,  $A > B \leq C$

👉 No definite relation between A and C

- Conclusion I ( $A > C$ ) X not definite
- Conclusion II ( $A \geq C$ ) X not definite

Q. 60

What will come at the place of question mark?

1, 9, 31, 73, 141, 241, ?

- a) 279 X
- b) 298 X
- c) 379 ✓
- d) 402 X

**Differences:**

$$9 - 1 = 8$$

$$31 - 9 = 22$$

$$73 - 31 = 42$$

$$141 - 73 = 68$$

$$241 - 141 = 100$$

**Explanation:**

**Difference pattern:**

$$8 \rightarrow 22 \rightarrow 42 \rightarrow 68 \rightarrow 100$$

Increase = **+14, +20, +26, +32** (increase by +6 each time)

Next increase = **+38**

Next difference = **100 + 38 = 138**

So,

$$241 + 138 = 379$$

Q. 61

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given.

Technology has become an integral part of modern education. Online platforms and digital tools have (1) \_\_\_\_\_ the way students access information. Instead of relying solely on textbooks, learners can now (2) \_\_\_\_\_ a wide range of resources instantly. However, this convenience also brings challenges. Excessive dependence on technology may (3) \_\_\_\_\_ critical thinking skills, as students often prefer quick answers over deep analysis. Moreover, the digital divide continues to (4) \_\_\_\_\_ equal opportunities, since not all students have access to reliable internet. To address these issues, educators must (5) \_\_\_\_\_ a balanced approach that combines traditional methods with modern innovations.

Q- What will come in blank (1)

- a) hindered
- b) transformed
- c) concealed
- d) ignored

**Solution:**

- The sentence says technology has changed how students access information.
- “**Transformed**” means *completely changed or improved in form or nature*, which fits the context.
- Other options are negative or irrelevant: **hindered** (obstructed), **concealed** (hidden), **ignored** (paid no attention).
- Therefore, the correct word for blank (1) is **transformed**.

**Explanation:**

Q. 62

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given.

Technology has become an integral part of modern education. Online platforms and digital tools have (1) \_\_\_\_\_ the way students access information. Instead of relying solely on textbooks, learners can now (2) \_\_\_\_\_ a wide range of resources instantly. However, this convenience also brings challenges. Excessive dependence on technology may (3) \_\_\_\_\_ critical thinking skills, as students often prefer quick answers over deep analysis. Moreover, the digital divide continues to (4) \_\_\_\_\_ equal opportunities, since not all students have access to reliable internet. To address these issues, educators must (5) \_\_\_\_\_ a balanced approach that combines traditional methods with modern innovations.

Q- What will come in blank (2)

- a) discard
- b) prevent
- c) restrict
- d) access

**Solution:**

- The sentence says that learners can now get a wide range of resources instantly.
- “Access” means *to reach, use, or obtain*, which perfectly fits the idea of using online resources.
- Other options are incorrect: **discard** (throw away), **prevent** (stop), **restrict** (limit) — all are opposite to the meaning needed.
- Hence, the correct word for blank (2) is **access**.

**Explanation:**

Q. 63

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given.

Technology has become an integral part of modern education. Online platforms and digital tools have (1) \_\_\_\_\_ the way students access information. Instead of relying solely on textbooks, learners can now (2) \_\_\_\_\_ a wide range of resources instantly. However, this convenience also brings challenges. Excessive dependence on technology may (3) \_\_\_\_\_ critical thinking skills, as students often prefer quick answers over deep analysis. Moreover, the digital divide continues to (4) \_\_\_\_\_ equal opportunities, since not all students have access to reliable internet. To address these issues, educators must (5) \_\_\_\_\_ a balanced approach that combines traditional methods with modern innovations.

Q- What will come in blank (3)

- a) weaken ✓
- b) strengthen ✗
- c) promote ✗
- d) enhance ✗

Solution:

- The sentence highlights a **negative effect** of excessive dependence on technology.
- It says students may lose the habit of deep analysis, which harms thinking ability.
- “**Weaken**” means *to make something less strong or less effective*, which fits this negative context.
- The other options (**strengthen, promote, enhance**) all show improvement, which contradicts the idea.

Explanation:

Q. 64

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given.

Technology has become an integral part of modern education. Online platforms and digital tools have (1) \_\_\_\_\_ the way students access information. Instead of relying solely on textbooks, learners can now (2) \_\_\_\_\_ a wide range of resources instantly. However, this convenience also brings challenges. Excessive dependence on technology may (3) \_\_\_\_\_ critical thinking skills, as students often prefer quick answers over deep analysis. Moreover, the digital divide continues to (4) \_\_\_\_\_ equal opportunities, since not all students have access to reliable internet. To address these issues, educators must (5) \_\_\_\_\_ a balanced approach that combines traditional methods with modern innovations.

Q- What will come in blank (4)

- a) ensure X
- b) obstruct ✓
- c) guarantee X
- d) establish X

**Solution:**

- The sentence talks about the **negative effect** of the digital divide.
- It suggests that equal opportunities are **blocked or hindered**, not supported.
- “**Obstruct**” means *to block, hinder, or prevent progress*, which fits perfectly.
- Other options (**ensure, guarantee, establish**) are positive and do not suit the context.

**Explanation:**

Q. 65

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given.

Technology has become an integral part of modern education. Online platforms and digital tools have (1) \_\_\_\_\_ the way students access information. Instead of relying solely on textbooks, learners can now (2) \_\_\_\_\_ a wide range of resources instantly. However, this convenience also brings challenges. Excessive dependence on technology may (3) \_\_\_\_\_ critical thinking skills, as students often prefer quick answers over deep analysis. Moreover, the digital divide continues to (4) \_\_\_\_\_ equal opportunities, since not all students have access to reliable internet. To address these issues, educators must (5) \_\_\_\_\_ a balanced approach that combines traditional methods with modern innovations.

Q- What will come in blank (5)

- a) reject
- b) abandon
- c) adopt
- d) oppose

Explanation:

Solution:

- The sentence suggests a positive, solution-oriented action by educators.
- They need to accept and use a balanced approach.
- “**Adopt**” means *to choose and start using a method or idea*, which fits perfectly.
- **Reject, abandon, oppose** all mean refusing or going against the approach, which contradicts the context.
- Therefore, the correct word for blank (5) is **adopt**.

Q. 66

Read the passage and answer the following questions:

The Great Barrier Reef, the world's largest coral reef system, is facing an unprecedented threat from coral bleaching. This phenomenon occurs when water temperatures rise, causing corals to expel the microscopic algae (*zooxanthellae*) living in their tissues. Without these algae, the coral loses its vibrant color and its primary source of food, making it vulnerable to disease and death. While reefs can recover if temperatures drop, the increasing frequency of marine heatwaves leaves little time for recuperation. Beyond its ecological value, the reef contributes billions of dollars to the Australian economy through tourism. The loss of this ecosystem would be both a biological catastrophe and a financial blow.

Q- What is the immediate cause of coral bleaching?

- a) Overfishing in the reef
- b) Rise in water temperatures
- c) Toxic chemical spills
- d) Lack of sunlight

Solution:

- The passage clearly states that coral bleaching occurs when water temperatures rise.
- Higher temperatures cause corals to expel microscopic algae (*zooxanthellae*) from their tissues.
- This loss leads to bleaching and makes corals weak and vulnerable.
- Hence, the immediate cause is rise in water temperatures.

Explanation:

Q. 67

Read the passage and answer the following questions:

The Great Barrier Reef, the world's largest coral reef system, is facing an unprecedented threat from coral bleaching. This phenomenon occurs when water temperatures rise, causing corals to expel the microscopic algae (zooxanthellae) living in their tissues. Without these algae, the coral loses its vibrant color and its primary source of food, making it vulnerable to disease and death. While reefs can recover if temperatures drop, the increasing frequency of marine heatwaves leaves little time for recuperation. Beyond its ecological value, the reef contributes billions of dollars to the Australian economy through tourism. The loss of this ecosystem would be both a biological catastrophe and a financial blow.

Q- What is 'zooxanthellae' as per the passage?

- a) A type of predatory fish X
- b) A disease affecting corals X
- c) Microscopic algae providing food to corals ✓
- d) A chemical used to clean reefs X

**Solution:**

- The passage explains that **zooxanthellae live inside coral tissues**.
- They are described as **microscopic algae**.
- These algae provide **food and energy** to corals and give them their vibrant colour.
- Therefore, zooxanthellae are **microscopic algae providing food to corals**.

**Explanation:**

Q. 68

Read the passage and answer the following questions:

The Great Barrier Reef, the world's largest coral reef system, is facing an unprecedented threat from coral bleaching. This phenomenon occurs when water temperatures rise, causing corals to expel the microscopic algae (zooxanthellae) living in their tissues. Without these algae, the coral loses its vibrant color and its primary source of food, making it vulnerable to disease and death. While reefs can recover if temperatures drop, the increasing frequency of marine heatwaves leaves little time for recuperation. Beyond its ecological value, the reef contributes billions of dollars to the Australian economy through tourism. The loss of this ecosystem would be both a biological catastrophe and a financial blow.

Q- Why is the "frequency" of heatwaves a major concern?

- a) It makes the water too salty. X
- b) It prevents the reef from having enough time to recover. ✓
- c) It attracts invasive species. X
- d) It boosts tourism too quickly. X

**Solution:**

- The passage says reefs **can recover if temperatures drop**, but this needs sufficient time.
- The **increasing frequency of marine heatwaves** means heat stress occurs again before recovery is complete.
- As a result, corals **do not get enough time to recuperate**, leading to long-term damage.
- Hence, the correct answer is **It prevents the reef from having enough time to recover.**

**Explanation:**

Q. 69

Read the passage and answer the following questions:

The Great Barrier Reef, the world's largest coral reef system, is facing an unprecedented threat from coral bleaching. This phenomenon occurs when water temperatures rise, causing corals to expel the microscopic algae (zooxanthellae) living in their tissues. Without these algae, the coral loses its vibrant color and its primary source of food, making it vulnerable to disease and death. While reefs can recover if temperatures drop, the increasing frequency of marine heatwaves leaves little time for recuperation. Beyond its ecological value, the reef contributes billions of dollars to the Australian economy through tourism. The loss of this ecosystem would be both a biological catastrophe and a financial blow.

Q- The passage implies that the Great Barrier Reef is important because:

- a) It has both ecological and economic significance. ✓
- b) It is the only reef in the world. ✗
- c) It prevents tsunamis. ✗
- d) It is a source of drinking water. ✗

**Solution:**

- The passage highlights the reef's **ecological value** as a vital marine ecosystem.
- It also states that the reef contributes **billions of dollars to the Australian economy through tourism**.
- The loss is described as both a **biological catastrophe** and a **financial blow**.
- Hence, the reef is important for **both ecological and economic reasons**.

**Explanation:**

Q. 70

Read the passage and answer the following questions:

The Great Barrier Reef, the world's largest coral reef system, is facing an unprecedented threat from coral bleaching. This phenomenon occurs when water temperatures rise, causing corals to expel the microscopic algae (zooxanthellae) living in their tissues. Without these algae, the coral loses its vibrant color and its primary source of food, making it vulnerable to disease and death. While reefs can recover if temperatures drop, the increasing frequency of marine heatwaves leaves little time for recuperation. Beyond its ecological value, the reef contributes billions of dollars to the Australian economy through tourism. The loss of this ecosystem would be both a biological catastrophe and a financial blow.

Q- Select the antonym for the word 'Vulnerable'.

- a) Weak
- b) Exposed
- c) Sensitive
- d) Resilient

Solution:

- "Vulnerable" means *easily harmed, weak, or exposed to danger*.
- The opposite meaning should show **strength and ability to withstand harm**.
- "Resilient" means *strong, able to recover quickly, and resistant to damage*.
- Hence, the correct antonym of **vulnerable** is **resilient**.

Explanation:

Q. 71

Which word is spelled incorrectly?

- a) Caribbean
- b) Pharaoh
- c) Harrass
- d) Vacuum

Explanation:

Solution:

- "Harrass" is spelled incorrectly.
- The correct spelling is "Harass" (with one 'r' and two 's').
- All other options — Caribbean, Pharaoh, Vacuum — are correctly spelled.
- Hence, the incorrect spelling is Harrass.

Q. 72

Read the passage and answer the following questions:

Modern education systems are often criticized for their reliance on rote memorization. Critics argue that the "factory model" of education, designed during the industrial era, is ill-equipped for the 21st century. In this model, students are treated as passive recipients of information rather than active participants in the learning process. The emphasis is on standardized testing, which often fails to measure a student's creativity or critical thinking abilities. Educators are now calling for a "pedagogical shift" toward inquiry-based learning. This approach encourages students to ask questions, experiment, and apply knowledge to real-world scenarios, thereby fostering a deeper understanding of the subject matter.

Q- What does the "factory model" of education emphasize?

- a) Creativity and art
- b) Physical education
- c) Individualized mentorship
- d) Rote memorization and standardized testing

Explanation:

Solution:

- The passage criticises the traditional **factory model** of education.
- It highlights a system where students rely on **rote memorization**.
- The focus is mainly on **standardized testing**, not creativity or critical thinking.
- Hence, the factory model emphasizes **rote memorization and standardized testing**.

Q. 73

Read the passage and answer the following questions:

Modern education systems are often criticized for their reliance on rote memorization. Critics argue that the "factory model" of education, designed during the industrial era, is ill-equipped for the 21st century. In this model, students are treated as passive recipients of information rather than active participants in the learning process. The emphasis is on standardized testing, which often fails to measure a student's creativity or critical thinking abilities. Educators are now calling for a "pedagogical shift" toward inquiry-based learning. This approach encourages students to ask questions, experiment, and apply knowledge to real-world scenarios, thereby fostering a deeper understanding of the subject matter.

Q- Why is the current education system considered "ill-equipped"?

a) It is too expensive.

b) It does not use enough technology.

c) It was designed for a different era and lacks focus on critical thinking.

d) Teachers are not well-trained.

**Solution:**

- The passage states that the **factory model** was designed during the **industrial era**.
- It treats students as **passive recipients** rather than encouraging active learning.
- It focuses on **rote memorization and standardized testing**, which fail to develop **creativity and critical thinking**.
- Therefore, the system is considered ill-equipped because it was designed for a different era and lacks focus on critical thinking.

**Explanation:**

Q. 74

Read the passage and answer the following questions:

Modern education systems are often criticized for their reliance on rote memorization. Critics argue that the "factory model" of education, designed during the industrial era, is ill-equipped for the 21st century. In this model, students are treated as passive recipients of information rather than active participants in the learning process. The emphasis is on standardized testing, which often fails to measure a student's creativity or critical thinking abilities. Educators are now calling for a "pedagogical shift" toward inquiry-based learning. This approach encourages students to ask questions, experiment, and apply knowledge to real-world scenarios, thereby fostering a deeper understanding of the subject matter.

Q- What is the main goal of "inquiry-based learning"?

- a) To eliminate exams entirely
- b) To increase the speed of reading
- c) To focus only on science and math
- d) To encourage students to be active participants and thinkers

**Solution:**

- The passage explains that inquiry-based learning encourages students to **ask questions, experiment, and apply knowledge**.
- This method treats learners as **active participants**, not passive recipients.
- It aims to develop **critical thinking and deeper understanding**.
- Hence, the main goal is **to encourage students to be active participants and thinkers**.

**Explanation:**

Q. 75

Read the passage and answer the following questions:

Modern education systems are often criticized for their reliance on rote memorization. Critics argue that the "factory model" of education, designed during the industrial era, is ill-equipped for the 21st century. In this model, students are treated as passive recipients of information rather than active participants in the learning process. The emphasis is on standardized testing, which often fails to measure a student's creativity or critical thinking abilities. Educators are now calling for a "pedagogical shift" toward inquiry-based learning. This approach encourages students to ask questions, experiment, and apply knowledge to real-world scenarios, thereby fostering a deeper understanding of the subject matter.

Q- What does the phrase "Pedagogical shift" mean in this context?

- a) A change in teaching methods ✓
- b) A decrease in school funding ✗
- c) A change in school uniform ✗
- d) A shift in the location of schools ✗

**Solution:**

- The passage mentions a move away from the traditional **factory model** of education.
- It talks about adopting **inquiry-based learning** instead of rote memorization.
- This indicates a **change in how teaching and learning are carried out**.
- Therefore, "**pedagogical shift**" means a **change in teaching methods**.

**Explanation:**

Q. 76

Read the passage and answer the following questions:

Modern education systems are often criticized for their reliance on rote memorization. Critics argue that the "factory model" of education, designed during the industrial era, is ill-equipped for the 21st century. In this model, students are treated as passive recipients of information rather than active participants in the learning process. The emphasis is on standardized testing, which often fails to measure a student's creativity or critical thinking abilities. Educators are now calling for a "pedagogical shift" toward inquiry-based learning. This approach encourages students to ask questions, experiment, and apply knowledge to real-world scenarios, thereby fostering a deeper understanding of the subject matter.

Q- According to the passage, standardized testing:

- a) Is the best way to measure intelligence. X
- b) Is a modern invention. X
- c) Often fails to capture a student's creative potential. ✓
- d) Is being removed from all schools. X

**Solution:**

- The passage states that standardized testing **often fails to measure creativity or critical thinking abilities**.
- This means it does not fully reflect a student's **creative potential**.
- The other options are either incorrect or not mentioned in the passage.
- Hence, the correct answer Often fails to capture a student's creative potential.

**Explanation:**

Q. 77

Read the passage and answer the following questions:

The global supply chain, once a hidden gears-and-pulleys system of world trade, has become a household topic. For decades, companies operated on a "just-in-time" model, keeping minimal inventory to cut costs. This lean system worked efficiently until the pandemic exposed its fragility. When factories closed and shipping routes were disrupted, the lack of buffer stock led to widespread shortages. Consequently, many firms are now transitioning to a "just-in-case" strategy. This involves diversifying suppliers and maintaining larger stockpiles of essential components. While this shift increases storage costs, it provides a crucial safety net against future volatility in the global market.

Q- What was the primary goal of the "just-in-time" model?

- a) To maximize inventory X
- b) To reduce costs by keeping minimal stock ✓
- c) To increase shipping speeds X
- d) To support local farmers X

**Solution:**

- The passage explains that companies using the **just-in-time** model kept **minimal inventory**.
- The main purpose of this system was to **cut costs**.
- By avoiding excess stock, firms reduced **storage and holding expenses**.
- Hence, the primary goal was **to reduce costs by keeping minimal stock**.

**Explanation:**

Q. 78

Read the passage and answer the following questions:

The global supply chain, once a hidden gears-and-pulleys system of world trade, has become a household topic. For decades, companies operated on a "just-in-time" model, keeping minimal inventory to cut costs. This lean system worked efficiently until the pandemic exposed its fragility. When factories closed and shipping routes were disrupted, the lack of buffer stock led to widespread shortages. Consequently, many firms are now transitioning to a "just-in-case" strategy. This involves diversifying suppliers and maintaining larger stockpiles of essential components. While this shift increases storage costs, it provides a crucial safety net against future volatility in the global market.

Q- What exposed the "fragility" of the global supply chain?

- a) A lack of workers
- b) High taxes on trade
- c) New environmental regulations
- d) The pandemic and subsequent disruptions

Explanation:

Solution:

- The passage states that the **pandemic exposed the fragility of the global supply chain**.
- Factory closures and **disrupted shipping routes** revealed the risks of minimal inventory.
- These disruptions led to **widespread shortages**, highlighting system weaknesses.
- Therefore, the correct answer is **The pandemic and subsequent disruptions**.

Q. 79

Read the passage and answer the following questions:

The global supply chain, once a hidden gears-and-pulleys system of world trade, has become a household topic. For decades, companies operated on a "just-in-time" model, keeping minimal inventory to cut costs. This lean system worked efficiently until the pandemic exposed its fragility. When factories closed and shipping routes were disrupted, the lack of buffer stock led to widespread shortages. Consequently, many firms are now transitioning to a "just-in-case" strategy. This involves diversifying suppliers and maintaining larger stockpiles of essential components. While this shift increases storage costs, it provides a crucial safety net against future volatility in the global market.

Q- What does the "just-in-case" strategy involve?

- a) Buying only when a customer places an order X
- b) Diversifying suppliers and increasing stockpiles ✓
- c) Moving all factories to one country X
- d) Stopping all international trade X

Explanation:

Solution:

- The passage explains that firms are shifting to a **just-in-case** strategy.
- This strategy includes **diversifying suppliers** to reduce dependence on a single source.
- It also involves **maintaining larger stockpiles of essential components** as a safety measure.
- Therefore, the correct answer is **Diversifying suppliers and increasing stockpiles**.

Q. 80

Read the passage and answer the following questions:

The global supply chain, once a hidden gears-and-pulleys system of world trade, has become a household topic. For decades, companies operated on a "just-in-time" model, keeping minimal inventory to cut costs. This lean system worked efficiently until the pandemic exposed its fragility. When factories closed and shipping routes were disrupted, the lack of buffer stock led to widespread shortages. Consequently, many firms are now transitioning to a "just-in-case" strategy. This involves diversifying suppliers and maintaining larger stockpiles of essential components. While this shift increases storage costs, it provides a crucial safety net against future volatility in the global market.

Q- What is a major disadvantage of the "just-in-case" model mentioned?

- a) It leads to shortages. X
- b) It is too fast for consumers. X
- c) It increases storage costs. ✓
- d) It reduces the quality of goods. X

Explanation:

**Solution:**

- The passage states that shifting to the **just-in-case** strategy involves keeping **larger stockpiles**.
- It clearly mentions that **this shift increases storage costs**.
- However, this disadvantage is accepted because it offers safety against future disruptions.
- Hence, the correct answer is **It increases storage costs**.

Q. 81

Read the passage and answer the following questions:

The global supply chain, once a hidden gears-and-pulleys system of world trade, has become a household topic. For decades, companies operated on a "just-in-time" model, keeping minimal inventory to cut costs. This lean system worked efficiently until the pandemic exposed its fragility. When factories closed and shipping routes were disrupted, the lack of buffer stock led to widespread shortages. Consequently, many firms are now transitioning to a "just-in-case" strategy. This involves diversifying suppliers and maintaining larger stockpiles of essential components. While this shift increases storage costs, it provides a crucial safety net against future volatility in the global market.

Q- Choose the most suitable title for this passage.

- a) The History of Shipping X
- b) The Rise of E-commerce X
- c) Evolution of Supply Chain Strategies ✓
- d) Why Local Markets are Better X

**Solution:**

- The passage discusses how supply chains moved from **just-in-time** to **just-in-case** strategies.
- It explains the **reasons for the shift**, especially after the pandemic.
- The focus is on **changing strategies in global supply chains**, not on shipping history or e-commerce alone.
- Therefore, the most suitable title is **Evolution of Supply Chain Strategies**.

Q. 82

Identify the part of the sentence that contains a grammatical error.

She is one of those / talented artists who / captures the essence of nature.

- a) She is one of those X
- b) talented artists who X
- c) captures the essence of nature. ✓
- d) No Error X

**Solution:**

- The subject of the relative clause is "**artists**" (plural), not "**she**".
- Therefore, the verb after **who** must also be **plural**.
- The correct verb should be "**capture**", not "**captures**".
- Hence, the error lies in "**captures the essence of nature**".

Q. 83

Change the narration of the following sentence:

"The judge asked the witness if he could recognize the man who had attacked him the previous night."

a) The judge said to the witness, "Can you recognize the man who attacked you last night?" ✓

b) The judge said to the witness, "Could you recognize the man who had attacked you the previous night?" ✗

c) The judge asked, "Did you recognize the man who attacked you yesterday night?" ✗

d) The judge said, "Do you recognize the man who attacks you last night?" ✗

Explanation:

Solution:

- The given sentence is in **indirect speech**.
- To convert it into **direct speech**, we must:
  - Change **asked** → **said to** (for a question in direct form).
  - Change **if** → **question form (Can you...?)**.
  - Change **could** → **can** (backshift reversal).
  - Change **the previous night** → **last night**.
- Option 1 correctly follows all these rules and preserves the meaning.

Correct Answer:

The judge said to the witness, "Can you recognize the man who attacked you last night?"

Q. 84

Rearrange the following sentence to form a coherent paragraph:

P: He realized that the only way to achieve true peace was through non-violence.

Q: After the carnage of the Kalinga War, Ashoka was filled with remorse.

R: This transformation led him to patronize Buddhism and spread its teachings across Asia.

S: His edicts, carved on pillars and rocks, still stand as a testament to his benevolent rule.

a) QPRS ✓

b) PQRS ✗

c) RPQS ✗

d) QRPS ✗

**Solution:**

- Sentence **Q** sets the **background** by mentioning Ashoka after the Kalinga War.
- Sentence **P** follows logically, describing his **realisation** about non-violence.
- Sentence **R** explains the **outcome of this transformation**, i.e., patronising Buddhism.
- Sentence **S** concludes by referring to his edicts as **lasting evidence** of his rule.
- Therefore, the correct order is **QPRS**.

**Explanation:**

<p style="text-align: center;">26 2601051251 2601051254</p> <p><b>Q. 85</b></p>	<p>Select the sentence that is grammatically correct:</p> <p>a) Neither the principal nor the teachers was present at the function. <span style="color: red;">X</span></p> <p>b) The team are divided in their opinion regarding the new captain. <span style="color: green;">✓</span></p> <p>c) One of the student has forgotten to bring the admit card. <span style="color: red;">X</span></p> <p>d) Scarcely had I reached the station than the train left. <span style="color: red;">X</span></p>
<p style="text-align: center;">2601051254</p> <p><b>Explanation:</b></p>	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>The correct sentence is Option (b): The team are divided in their opinion regarding the new captain.</li> <li>Option (a) is incorrect because with “neither...nor”, the verb agrees with the <b>nearest subject</b>. Since <i>teachers</i> is plural, it should be <b>were present</b>, not <i>was present</i>.</li> <li>Option (b) is correct because “team” is a <b>collective noun</b>. When it refers to members acting individually (divided opinions), a <b>plural verb (are)</b> is grammatically correct in British English.</li> <li>Option (c) is incorrect because “one of the students” is followed by a <b>singular verb</b>, but the noun must be plural. It should be “<b>One of the students has forgotten...</b>”.</li> <li>Option (d) is incorrect because “scarcely” is followed by “when”, not “than”. The correct structure is <i>Scarcely had I reached the station when the train left</i>.</li> </ul>
<p style="text-align: center;">2601051254</p> <p><b>Q. 86</b></p>	<p>Choose the word that is opposite in meaning to the highlighted word. Success in this field requires a <b>brazen</b> attitude toward risk.</p> <p>a) Bold <span style="color: red;">X</span></p> <p>b) Timid <span style="color: green;">✓</span></p> <p>c) Shameless <span style="color: red;">X</span></p> <p>d) Confident <span style="color: red;">X</span></p> <p><b>Explanation:</b></p> <p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>The correct answer is Option (b): Timid.</li> <li>Brazen means bold, shameless, or showing a lack of fear, especially in taking risks.</li> <li>Timid means shy, fearful, or lacking confidence, which is the direct opposite.</li> <li>Bold, Shameless, and Confident are either similar in meaning or supportive of <i>brazen</i>, not opposite.</li> </ul>

Q. 87

Change the narration of the following sentence:

The Manager said to the employee, "Why did you not submit the report yesterday? I have been waiting for it since morning."

a) The Manager asked the employee why he had not submitted the report the previous day and added that he had been waiting for it since morning.



b) The Manager told the employee why he didn't submit the report yesterday and that he was waiting for it since morning.



c) The Manager questioned the employee about the report and said he is waiting since morning.



d) The Manager asked the employee why he has not submitted the report the previous day and that he had been waiting for it.



**Solution:**

- The correct answer is **Option (a)**.
- The sentence contains a **question followed by a statement**, so “**said to**” changes to “**asked**”, and the reporting verb “**added**” is used for the second part.
- In indirect speech, **past simple** (*did not submit*) changes to **past perfect** (*had not submitted*).
- Time expressions also change: “**yesterday**” → “**the previous day**”, and “**since morning**” remains correct with **past perfect continuous** (*had been waiting*).
- Other options are incorrect due to **wrong tense shift**, **incorrect reporting verb**, or **mixed direct-indirect structure**.

**Explanation:**

Q. 88

Choose the word that is opposite in meaning to the highlighted word.

The water in the mountain stream was **turbid** after the heavy rain.

a) Muddy

b) Clear

c) Cold

d) Deep

Explanation:

Solution:

- The correct answer is Option (b): **Clear**.
- The word **turbid** means **cloudy, dirty, or unclear**, especially used for liquids like water.
- **Clear** is the direct opposite, meaning **clean, transparent, and free from impurities**.
- **Muddy** is similar in meaning to *turbid*, not opposite.
- **Cold** and **Deep** describe temperature and depth, not clarity.

Q. 89

Choose the word that is closest in meaning to the highlighted word.

The CEO's **candid** remarks during the meeting surprised the shareholders.

a) Deceptive

b) Honest

c) Ambiguous

d) Lengthy

Explanation:

Solution:

- The correct answer is Option (b): **Honest**.
- The word **candid** means **truthful, frank, and straightforward**, without concealment.
- **Honest** is the closest synonym because it also means **truthful and sincere**.
- **Deceptive** means misleading (opposite in meaning), **Ambiguous** means unclear or having multiple meanings, and **Lengthy** means long in duration or size.

Q. 90 2601051251 2601051254	<p>Select the most appropriate meaning of the idiom:      "To burn the candle at both ends".</p> <p>a) To be very wealthy <input checked="" type="checkbox"/> X</p> <p>b) To work excessively hard without rest <input checked="" type="checkbox"/> ✓</p> <p>c) To waste money on luxury <input checked="" type="checkbox"/> X</p> <p>d) To survive a difficult situation <input checked="" type="checkbox"/> X</p>
Explanation: 2601051254	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>The correct answer is Option (b): To work excessively hard without rest.</li> <li>The idiom "to burn the candle at both ends" means overworking oneself, often by working late at night and early in the morning, without adequate rest.</li> <li>It suggests a lifestyle that is unsustainable and exhausting in the long run.</li> <li>The other options do not convey the idea of physical or mental overexertion.</li> </ul>
Q. 91 2601051251 2601051254	<p>Identify the figure of speech in the given sentence:      "The stars danced playfully in the moonlit sky."</p> <p>a) Simile <input checked="" type="checkbox"/> X</p> <p>b) Metaphor <input checked="" type="checkbox"/> X</p> <p>c) Personification <input checked="" type="checkbox"/> ✓</p> <p>d) Oxymoron <input checked="" type="checkbox"/> X</p>
Explanation: 2601051251 2601051254	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>The correct answer is Personification.</li> <li>Personification is a figure of speech in which human qualities or actions are given to non-human objects.</li> <li>In the sentence, stars are described as "dancing playfully," which is a human action, so personification is used.</li> <li>There is no comparison using like or as (so not a simile), no direct symbolic identity (so not a metaphor), and no contradictory terms (so not an oxymoron).</li> </ul>

Q. 92	<p>Select the most appropriate antonym of the word 'REPREHENSIBLE'</p> <p>a) Blameworthy <span style="color: red;">X</span></p> <p>b) Praiseworthy <span style="color: green;">✓</span></p> <p>c) Forgivable <span style="color: red;">X</span></p> <p>d) Erroneous <span style="color: red;">X</span></p>
Explanation:	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>• The correct answer is <b>Praiseworthy</b>.</li> <li>• <b>Reprehensible</b> means <b>deserving strong criticism or blame</b>.</li> <li>• <b>Praiseworthy</b> means <b>deserving praise or approval</b>, which is the direct opposite in meaning.</li> <li>• <b>Blameworthy</b> means <b>deserving blame</b>, so it is a synonym, not an antonym.</li> <li>• <b>Forgivable</b> means <b>capable of being forgiven</b>; it is related to leniency, not the opposite of blame.</li> <li>• <b>Erroneous</b> means <b>incorrect or mistaken</b>, which is unrelated to moral judgement.</li> </ul>

Q. 93

Arrange the following sentences to form a coherent paragraph:

S1: The Renaissance was a fervent period of European cultural, artistic, political, and economic rebirth.

P: It promoted the rediscovery of classical philosophy, literature, and art.

Q: Some of the greatest thinkers, authors, statesmen, scientists, and artists in human history thrived during this era.

R: Global exploration opened up new lands and cultures to European commerce.

S: This period also saw the development of the printing press, which revolutionized the spread of knowledge.

S6: Ultimately, the Renaissance bridged the gap between the Middle Ages and modern-day civilization.

a) PQRS ✓

b) QPSR ✗

c) RQPS ✗

d) SRQP ✗

**Solution:**

- The correct answer is **Option (a): PQRS**.
- **S1** clearly introduces the topic by defining the Renaissance, so it must come first.
- **P** logically follows because it explains a **core feature** of the Renaissance—the rediscovery of classical philosophy, literature, and art.
- **Q** comes next, as the revival of classical learning naturally led to the rise of **great thinkers, scientists, artists, and statesmen**.
- **R** follows by expanding the impact of the Renaissance into **global exploration and commerce**, showing its wider influence.
- **S** (printing press) supports the spread of ideas and fits after the intellectual flowering.
- **S6** works as the **concluding sentence**, summarising the overall historical importance of the Renaissance.
- Among the given options, **PQRS** best preserves this logical flow.

**Explanation:**

Q. 94

Change the voice of the following sentence:

"Who do you think has stolen the ancestral jewels from the vault?"

- a) By whom do you think have the ancestral jewels been stolen from the vault? X
- b) Who is thought by you to have stolen the ancestral jewels from the vault? X
- c) By whom are the ancestral jewels thought to have been stolen from the vault? ✓
- d) Who do you think the ancestral jewels have been stolen by? X

**Solution:**

- The correct answer is Option (c): By whom are the ancestral jewels thought to have been stolen from the vault?
- In passive voice, "Who do you think...?" changes to "By whom are ... thought to have been...?", keeping the reporting verb **think** in passive form.
- **Option (a)** is incorrect because "**have**" is wrongly placed; with plural subject and passive structure, it should be "**are ... thought**", not "**do you think have...**".
- **Option (b)** is incorrect because "**Who is thought by you**" is awkward and grammatically weak; English avoids using "**by you**" with verbs like *think*.
- **Option (d)** is incorrect because it ends with "**by?**", which is not the correct or formal passive structure for such sentences.

**Explanation:**

Q. 95	<p>Choose the most appropriate one-word substitute for the following phrase:      'A person who is excessively concerned with minor details and rules.'</p> <p>a) Pedant ✓</p> <p>b) Polyglot ✗</p> <p>c) Philistine ✗</p> <p>d) Perfidious ✗</p>
Explanation:	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>Pedant is the correct answer because it refers to a person who is <b>excessively concerned with minor details, rules, or formal correctness</b>, often beyond what is practical.</li> <li>Polyglot means a person who <b>knows or speaks many languages</b>; it has no connection with rules or nit-picking behaviour.</li> <li>Philistine refers to a person who is <b>hostile or indifferent to art, culture, or intellectual values</b>, not someone obsessed with rules.</li> <li>Perfidious describes someone who is <b>treacherous or deceitful</b>; it relates to betrayal, not attention to minor details.</li> </ul>
Q. 96	<p>Change the voice of the following sentence:      "It is expected that the global economy will recover by the end of the next fiscal year."</p> <p>a) People expect the global economy to recover by the end of the next fiscal year. ✓</p> <p>b) We are expecting the global economy to recover. ✗</p> <p>c) The global economy is expecting a recovery. ✗</p> <p>d) They have expected the recovery of the global economy. ✗</p>
Explanation:	<p><b>Solution:</b></p> <ul style="list-style-type: none"> <li>The given sentence is in <b>passive voice</b> using an <b>impersonal construction</b>: "<i>It is expected that...</i>".</li> <li>To change it into <b>active voice</b>, we need a <b>clear subject</b> performing the action.</li> <li>"<b>People expect the global economy to recover by the end of the next fiscal year.</b>" correctly converts the passive structure into active while <b>preserving tense and meaning</b>.</li> <li>Other options either change the tense, sound unnatural, or are grammatically incorrect.</li> </ul>

Q. 97

Arrange the following sentences to form a coherent paragraph:

- A. These predators play a crucial role in maintaining the balance of the ecosystem by controlling the population of herbivores.
- B. Without them, the overgrazing of vegetation would lead to habitat destruction for smaller species.
- C. In many forest reserves, the tiger is considered the apex predator at the top of the food chain.
- D. Therefore, the conservation of tigers is not just about saving one species, but about protecting the entire forest.

- a) CABD ✓
- b) ACBD ✗
- c) CBAD ✗
- d) ABCD ✗

Explanation:

- Solution:**
- Sentence **C** introduces the subject by identifying the tiger as the **apex predator**.
  - Sentence **A** explains the **role of these predators** in maintaining ecosystem balance.
  - Sentence **B** logically follows by describing what would happen **without them**.
  - Sentence **D** concludes with the **resulting implication** about conservation.
  - Hence, the correct order is **CABD**.

<p style="text-align: right;">Q. 98</p> <p style="text-align: right;">2601051254</p> <p style="text-align: right;">Explanation:</p>	<p>Identify the part of the sentence that contains a grammatical error.</p> <p>To the unwary traveler, / the desert can appear / as if it was an endless ocean.</p> <p>a) No Error      ✗</p> <p>b) To the unwary traveler,      ✗</p> <p>c) the desert can appear      ✗</p> <p>d) as if it was an endless ocean.      ✓</p>
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Q. 99

Arrange the following sentences to form a coherent paragraph:

- A. In the long run, however, the heavy reliance on artificial fertilizers can lead to the degradation of soil health.
- B. Farmers initially adopted these chemical inputs to significantly boost crop yields and meet the demands of a growing population.
- C. This degradation eventually reduces the land's productivity, forcing farmers to use even more chemicals to achieve the same results.
- D. Modern agriculture has faced a complex dilemma regarding the use of synthetic chemicals over the last few decades.

a) DABC

b) DBAC

c) BDAC

d) DCAB

**Solution:**

- Sentence **D** introduces the **topic**: the dilemma of using synthetic chemicals in modern agriculture.
- Sentence **B** logically follows by explaining **why farmers adopted** chemical inputs initially.
- Sentence **A** then presents the **long-term negative consequence** of this heavy reliance.
- Sentence **C** concludes by explaining the **cycle of degradation and increased chemical use**.
- Hence, the correct order is **DBAC**.

**Explanation:**

Q. 100

Identify the part of the sentence that contains a grammatical error.

Between you and I, / whomever the committee chooses / will face significant scrutiny.

a) Between you and I, ✓

b) No Error ✗

c) whomever the committee chooses ✗

d) will face significant scrutiny. ✗

Explanation:

Solution:

- The phrase "**Between you and I**" is incorrect.
- After the preposition **between**, an **objective pronoun** is required.
- The correct form should be "**Between you and me**".
- Hence, the grammatical error is in "**Between you and I**".

Q. 101

Fill in the blank with the appropriate preposition:

'The soldiers marched \_\_\_\_\_ the bridge to reach the city.'

a) across ✓

b) through ✗

c) among ✗

d) between ✗

Explanation:

Answer: across

Explanation:

The correct preposition is "**across**", which is used when movement is **from one side of a surface or structure to the other**, such as a bridge.

- **Through** is used for movement inside something enclosed.
- **Among** is used for more than two people or things.
- **Between** is used for two people or things, not for movement over a bridge.

Q. 102

Select the correct homonym to fill in the blank.

The \_\_\_\_\_ of the local church was very helpful to the community.

- a) Poster
- b) Paster
- c) Pasture
- d) Pastor

Explanation:

**Answer:** Pastor

**Explanation:**

The correct homonym is **pastor**, which means a **minister or priest who leads a church and serves the community**.

- **Poster** means a printed notice or advertisement.
- **Paster** refers to someone who pastes or sticks things.
- **Pasture** means grazing land for animals.

Q. 103

Select the most appropriate antonym of the word 'Ephemeral'.

- a) Brief
- b) Fleeting
- c) Eternal
- d) Transient

Explanation:

**Answer:** Eternal

**Explanation:**

The word "**ephemeral**" means *lasting for a very short time*.

- **Eternal** means *lasting forever*, which is the **direct opposite**.
- **Brief, fleeting**, and **transient** all have meanings similar to ephemeral, not opposite.

Q. 104	<p>Select the most appropriate antonym of 'Apathy'.</p> <p>a) Detachment <input checked="" type="checkbox"/> X</p> <p>b) Indifference <input checked="" type="checkbox"/> X</p> <p>c) Lethargy <input checked="" type="checkbox"/> X</p> <p>d) Enthusiasm <input checked="" type="checkbox"/> ✓</p>
Explanation:	<p><b>Answer:</b> Enthusiasm</p> <p><b>Explanation:</b></p> <p>The word “apathy” means <i>lack of interest, feeling, or concern</i>.</p> <ul style="list-style-type: none"> <li>• <b>Enthusiasm</b> means <i>strong interest, eagerness, or excitement</i>, which is the opposite of apathy.</li> <li>• <b>Detachment, indifference, and lethargy</b> all express lack of interest or energy, so they are similar in meaning to apathy, not antonyms.</li> </ul>
Q. 105	<p>Select the most appropriate synonym of the highlighted word in the given sentence.</p> <p>The committee's decision was unanimous, showing complete agreement among all members.</p> <p>a) Concordant <input checked="" type="checkbox"/> ✓</p> <p>b) Divided <input checked="" type="checkbox"/> X</p> <p>c) Hostile <input checked="" type="checkbox"/> X</p> <p>d) Ambiguous <input checked="" type="checkbox"/> X</p>
Explanation:	<p><b>Answer:</b> Concordant</p> <p><b>Explanation:</b></p> <p>The word “unanimous” means having complete agreement or being of one mind.</p> <ul style="list-style-type: none"> <li>• <b>Concordant</b> means <i>in agreement or harmony</i>, which matches the meaning of unanimous.</li> <li>• <b>Divided</b> means <i>not in agreement</i>.</li> <li>• <b>Hostile</b> means <i>unfriendly or aggressive</i>.</li> <li>• <b>Ambiguous</b> means <i>unclear or having more than one meaning</i>.</li> </ul>

Q. 106

Which of the following statements about the Revolt of 1857 is/are correct?

- 1- The revolt was started by Mangal Pandey at Meerut.  
2- The official historian of the Revolt of 1857 was S. N. Sen.

- a) 1 only      ✗  
b) 2 only      ✓  
c) Both 1 & 2      ✗  
d) Neither 1 & 2      ✗

Explanation:

- Statement 1 is incorrect.

The Revolt of 1857 began at Meerut, but Mangal Pandey did not start it at Meerut.

Mangal Pandey's incident occurred earlier in Barrackpore (29 March 1857) and is considered a precursor, not the starting point of the revolt.

The actual outbreak started on 10 May 1857 at Meerut by sepoys.

- Statement 2 is correct.

S. N. Sen is recognised as the official historian of the Revolt of 1857.

His work Eighteen Fifty-Seven is considered the authorised government history.

Hence, the correct answer is 2 only.

Q. 107

With respect to Fundamental Rights in the Indian Constitution, which among the following statements is/are correct?

- 1- The Right to Property is a Fundamental Right guaranteed under Article 31.  
2- Article 21, the Right to Life, can be suspended during a National Emergency.

- a) 1 only X
- b) 2 only X
- c) Both 1 & 2 X
- d) Neither 1 & 2 ✓

Explanation:

- Statement 1 is incorrect.

The Right to Property was originally a Fundamental Right under Article 31, but it was removed by the 44th Constitutional Amendment Act, 1978. Today, it is only a legal right under Article 300A.

- Statement 2 is incorrect.

Article 21 (Right to Life and Personal Liberty) cannot be suspended, even during a National Emergency.

The 44th Amendment ensured that Articles 20 and 21 remain enforceable at all times, including during emergencies.

Therefore, both statements are incorrect.

Q. 108

Consider the following statements regarding Ocean Tides and answer which of them is/are correct?

- 1- Spring Tides occur when the Sun, Moon, and Earth are in a straight line.  
2- Neap Tides occur when the Sun and Moon are at a right angle to the Earth.

- a) 1 only X  
b) 2 only X  
c) Both 1 & 2 ✓  
d) Neither 1 & 2 X

Explanation:

- Statement 1 is correct.

Spring tides occur during full moon and new moon, when the Sun, Moon, and Earth lie in a straight line.

Their combined gravitational pull produces higher high tides and lower low tides.

- Statement 2 is correct.

Neap tides occur during first quarter and last quarter phases of the Moon, when the Sun and Moon are at a right angle ( $90^\circ$ ) to the Earth.

This reduces the gravitational pull, resulting in lower high tides and higher low tides.

Thus, both statements are correct.

Q. 109	<p>Who has written the book 'The Accumulation of Capital'?</p> <p>a) John Marshall <input checked="" type="checkbox"/> X</p> <p>b) Adam Smith <input checked="" type="checkbox"/> X</p> <p>c) Maynard Keynes <input checked="" type="checkbox"/> X</p> <p>d) Joan Robinson <input checked="" type="checkbox"/> ✓</p>
Explanation:	<p><b>Explanation:</b></p> <ul style="list-style-type: none"> <li>• 'The Accumulation of Capital' is a famous economic work written by <b>Joan Robinson</b>, a prominent post-Keynesian economist.</li> <li>• Published in <b>1956</b>, the book explains long-run economic growth, capital accumulation, profits, and employment using a critique and extension of Keynesian ideas.</li> <li>• Joan Robinson is well-known for her contributions to imperfect competition and development economics.</li> </ul> <p>Hence, the correct answer is <b>Joan Robinson</b>.</p>
Q. 110	<p>Basaltic Lava Rocks over Indian Deccan Plateau belongs to which time period?</p> <p>a) Cretaceous Period <input checked="" type="checkbox"/> ✓</p> <p>b) Pleistocene Period <input checked="" type="checkbox"/> X</p> <p>c) Carboniferous Period <input checked="" type="checkbox"/> X</p> <p>d) Miocene Period <input checked="" type="checkbox"/> X</p>
Explanation:	<p><b>Explanation:</b></p> <p>The <b>Deccan Traps</b> (basaltic lava rocks spread over the Deccan Plateau) were formed due to massive volcanic eruptions that occurred around <b>66 million years ago</b>, at the end of the <b>Cretaceous Period</b>.</p> <p><b>Key points:</b></p> <ul style="list-style-type: none"> <li>• These eruptions are linked with the mass extinction event that wiped out the dinosaurs.</li> <li>• The rocks belong to the <b>Upper Cretaceous to Lower Paleogene</b> time frame.</li> <li>• The basaltic layers are among the largest volcanic formations in the world.</li> </ul> <p>Therefore, the correct answer is <b>Cretaceous Period</b>.</p>

Q. 111

With reference to the Panchayati Raj Institutions, which among the following states is/are correct?

- 1- The minimum age for contesting elections to the Panchayat is 25 years.
  - 2- The State Election Commission is responsible for conducting all elections to the Panchayats.
- a) 1 only  X
- b) 2 only  ✓
- c) Both 1 & 2  X
- d) Neither 1 & 2  X

Explanation:

- Statement 1 is incorrect.

The minimum age to contest Panchayat elections is 21 years, not 25.

This applies to all levels of Panchayati Raj Institutions.

- Statement 2 is correct.

The State Election Commission (SEC) conducts elections to:

- Panchayats
- Municipalities

This power is given under Articles 243K and 243ZA of the Constitution.

Therefore, only Statement 2 is correct.

Q. 112

Which reference to DNA and RNA which among the following statements is/are correct?

- 1- Both DNA and RNA contain the nitrogenous base Thymine.
  - 2- DNA is a double-stranded helix, while RNA is generally a single-stranded molecule.
- a) 1 only X
- b) 2 only ✓
- c) Both 1 & 2 X
- d) Neither 1 & 2 X

Explanation:

- Statement 1 is incorrect.
  - DNA contains Thymine (T), but RNA does NOT contain Thymine.
  - Instead, RNA contains Uracil (U).Therefore, the statement is wrong.
- Statement 2 is correct.
  - DNA is typically a double-stranded helical molecule.
  - RNA is generally single-stranded, except in some viruses.

Thus, only Statement 2 is correct.

Q. 113

Dolvi Steel Plant is located in which Indian State?

- a) Karnataka X
- b) Odisha X
- c) Tamil Nadu X
- d) Maharashtra ✓

Explanation:

- The Dolvi Steel Plant (formerly owned by JSW Steel after acquiring Bhushan Steel) is located at Dolvi, near Pen in Raigad district, Maharashtra.
- It is an important coastal steel plant connected through the Arabian Sea, enabling efficient import of raw materials and export of finished steel.

Thus, the correct answer is Maharashtra.

Q. 114

With reference to the procedure for amending the Constitution of India, which among the following statements is/are correct?

1- An amendment bill can be introduced by either a Minister or a private member.

2- An amendment bill requires the prior recommendation of the President.

a) 1 only ✓

b) 2 only ✗

c) Both 1 & 2 ✗

d) Neither 1 & 2 ✗

Explanation:

- Statement 1 is correct.

A Constitution Amendment Bill can be introduced in either House of Parliament by a Minister or a private member.

There is no restriction regarding who can introduce it.

- Statement 2 is incorrect.

A Constitution Amendment Bill does NOT require the prior recommendation of the President.

The only requirement is that it must be passed by the special majority required under Article 368 (and by half of the state legislatures when required).

Therefore, only Statement 1 is correct.

Q. 115

Which of the following statements about the World Trade Organization (WTO) is/are correct?

- 1- The WTO officially commenced in 1995, succeeding the General Agreement on Tariffs and Trade (GATT).
  - 2- It aims to reduce trade barriers and provide a framework for international trade negotiations.
  - 3- It is headquartered in New York, USA.
- a) 1 & 2 only ✓
- b) 2 & 3 only ✗
- c) 1 & 3 only ✗
- d) 1, 2 & 3 All ✗

Explanation:

**Explanation:**

**Statement 1 → Correct**

- The World Trade Organization (WTO) officially came into existence on 1 January 1995.
- It replaced and expanded the mandate of GATT (General Agreement on Tariffs and Trade), which had been in place since 1948.

**Statement 2 → Correct**

WTO's primary objectives include:

- Reducing **trade barriers** (tariffs, quotas, subsidies).
- Providing a **platform for trade negotiations**.
- Ensuring smooth, predictable, and free international trade.

Thus, this statement is correct.

**Statement 3 → Incorrect**

- WTO is **not headquartered in New York**.
- Its official headquarters is in **Geneva, Switzerland**.

<p><b>Q. 116</b></p> <p><b>Explanation:</b></p>	<p>Which among the following option is correctly mentioned as per the date of formation of Indian State?</p> <p>a) Haryana – 1 November, 1966 ✓</p> <p>b) Mizoram – 25 June, 1986 ✗</p> <p>c) Telangana – 15 August, 2014 ✗</p> <p>d) Chhattisgarh – 20 November, 2000 ✗</p>
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Q. 117

Which of the following statements about the Sustainable Development Goals (SDGs) is/are correct?

1- The SDGs succeeded the Millennium Development Goals (MDGs).

2- There are a total of 17 SDGs to be achieved by the year 2050.

a) 1 only ✓

b) 2 only ✗

c) Both 1 & 2 ✗

d) Neither 1 & 2 ✗

**Explanation:**

**Explanation:**

**Statement 1 → Correct**

- The Sustainable Development Goals (SDGs) were adopted by the UN in 2015.
- They replaced and succeeded the earlier Millennium Development Goals (MDGs), which covered the period 2000–2015.

**Statement 2 → Incorrect**

- There are indeed 17 SDGs, but the target year is 2030, not 2050.
- The global agenda is formally called “Agenda 2030 for Sustainable Development.”

Hence, the statement is wrong.

Q. 118	<p>Which of the following musical instruments is/are correctly matched with its type of sound production?</p> <p>1- Pakhawaj: Membranophone      2- Sarangi: Chordophone</p> <p>a) 1 only <span style="color: red;">X</span>      b) 2 only <span style="color: red;">X</span>      c) Both 1 &amp; 2 <span style="color: green;">✓</span>      d) Neither 1 &amp; 2 <span style="color: red;">X</span></p>
Explanation:	<p><b>Explanation:</b></p> <p><b>Statement 1: Pakhawaj → Membranophone → Correct</b></p> <ul style="list-style-type: none"> <li>The <b>Pakhawaj</b> is a traditional barrel-shaped drum.</li> <li>Its sound is produced by <b>vibrating stretched membranes</b>, which makes it a <b>membranophone</b>.</li> </ul> <p><b>Statement 2: Sarangi → Chordophone → Correct</b></p> <ul style="list-style-type: none"> <li>The <b>Sarangi</b> is a bowed string instrument.</li> <li>Its sound is produced by <b>vibrating strings</b>, so it is classified as a <b>chordophone</b>.</li> </ul> <p>Thus, both statements are correctly matched.</p>
Q. 119	<p>In August 2025, the Assam Rifles and the Indian Air Force conducted a joint humanitarian mission to aid villages in Manipur cut off by landslides. What was this operation called?</p> <p>a) Operation Maitri <span style="color: red;">X</span>      b) Operation Sankat Mochan <span style="color: red;">X</span>      c) Operation Insaniyat <span style="color: red;">X</span>      d) Operation Sahyog <span style="color: green;">✓</span></p> <p><b>Explanation:</b></p> <ul style="list-style-type: none"> <li>In August 2025, the <b>Assam Rifles</b> and the <b>Indian Air Force</b> jointly carried out a <b>humanitarian assistance operation</b> to support remote villages in <b>Manipur</b> that were cut off due to severe landslides.</li> <li>This relief mission was officially named "<b>Operation Sahyog</b>".</li> <li>The operation involved airlifting essential supplies, medical assistance, and evacuating affected residents.</li> </ul> <p>Thus, the correct answer is <b>Operation Sahyog</b>.</p>

Q. 120

Which of the following statements about the Public Accounts Committee (PAC) of the Parliament is/are correct?

- 1- It consists of 22 members, with 15 from Lok Sabha and 7 from Rajya Sabha.
  - 2- The Chairman of the Committee is invariably appointed from the ruling party.
- a) 1 only ✓
- b) 2 only ✗
- c) Both 1 & 2 ✗
- d) Neither 1 & 2 ✗

Explanation:

**Explanation:**

**Composition of PAC**

- The Public Accounts Committee (PAC) consists of **22 members**:
  - 15 from Lok Sabha
  - 7 from Rajya Sabha
- ✓ Statement 1 is **correct**.

**Chairman of PAC**

- By convention since **1967**, the Chairman of PAC is **appointed from the Opposition party**, not the ruling party.
- This ensures independent scrutiny of government expenditure.
- ✗ Statement 2 is **incorrect**.

Q. 121

Which among the following statements is/are correct?

- 1- The resistance of a metallic wire is inversely proportional to its length.
  - 2- A short circuit occurs when the live wire and the neutral wire come into direct contact.
- a) 1 only X
- b) 2 only ✓
- c) Both 1 & 2 X
- d) Neither 1 & 2 X

**Explanation:**

- Statement 1 is incorrect.

The resistance  $R$  of a metallic wire is given by:

$$R = \rho \frac{L}{A}$$

This shows that resistance is **directly proportional to length (L)**, not inversely.

→ Longer wire = higher resistance

→ Shorter wire = lower resistance

- Statement 2 is correct.

A **short circuit** happens when the **live (phase) wire** and the **neutral wire** come in **direct contact**.

This causes:

- Sudden flow of **excessive current**
- Risk of **fire, damage to appliances, and tripping of circuit breakers**

Hence, the correct answer is **2 only**.

Q. 122

Which of the following statements about government schemes is/are correct?

1- The PM-Kisan scheme provides a minimum fixed pension to eligible small and marginal farmers.

2- The Production Linked Incentive (PLI) scheme aims to boost domestic manufacturing and attract large investments.

a) 1 only

b) 2 only

c) Both 1 & 2

d) Neither 1 & 2

**Explanation:**

- Statement 1 is incorrect.

PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) provides income support of ₹6,000 per year to all eligible farmer families.

It does NOT provide a pension.

The scheme that provides a pension is PM-KMY (Pradhan Mantri Kisan Maandhan Yojana).

- Statement 2 is correct.

The Production Linked Incentive (PLI) Scheme was launched to:

- Boost domestic manufacturing
  - Increase exports
  - Attract large-scale investments
  - Enhance the global competitiveness of Indian industries
- It covers sectors like electronics, pharmaceuticals, textiles, drones, and more.

**Explanation:**

Q. 123

Consider the following types of banks and their primary functions:

- 1- Commercial Banks: Accept deposits and grant loans to the public.
- 2- Payment Banks: Cannot issue credit cards or grant loans.

Which of the pairs given above is/are correctly matched?

- a) 1 only X
- b) 2 only X
- c) Both 1 & 2 ✓
- d) Neither 1 & 2 X

**Explanation:**

**Pair 1: Commercial Banks — Accept deposits & give loans → Correct**

Commercial banks perform the following key functions:

- Accepting deposits
- Providing loans and advances
- Offering credit facilities
- Providing basic banking services to individuals and businesses

**Explanation:**

Hence, the statement is correct.

**Pair 2: Payment Banks — Cannot issue credit cards or grant loans → Correct**

According to RBI guidelines, **Payment Banks**:

- Can accept deposits (up to ₹2 lakh per customer)
- Can issue debit cards
- Cannot issue credit cards
- Cannot grant loans or advances

Their role is limited to payments and remittances, not credit creation.

Q. 124

Consider the following pairs of architectural styles/monuments and their associated characteristics:

- 1- Gandhara School of Art: Strong Hellenistic influence.
- 2- Shore Temple: Example of a monolithic rock-cut temple.

Which of the pairs given above is/are correctly matched?

- a) 1 only ✓
- b) 2 only ✗
- c) Both 1 & 2 ✗
- d) Neither 1 & 2 ✗

**Explanation:**

- **Pair 1: Gandhara School of Art — Strong Hellenistic Influence → Correct**  
The Gandhara School (influenced by Greeks after Alexander's invasion) shows:
  - Hellenistic/Greco-Roman features
  - Realistic body forms, wavy hair, drapery
  - First anthropomorphic images of BuddhaHence, this pair is correctly matched.

- **Pair 2: Shore Temple — Monolithic Rock-cut Temple → Incorrect**  
The **Shore Temple at Mahabalipuram (Mamallapuram)** is not monolithic. It is a **structural temple**, meaning:
  - Built using carved blocks of granite
  - Not carved out of a single rockMahabalipuram does have monolithic temples (**Five Rathas**), but Shore Temple is not one of them.

Thus, only **Pair 1** is correct.

Q. 125

Which among the following statements is/are correct?

1- Biosphere Reserves are protected areas aimed at promoting sustainable development and conservation.

2- Wildlife Sanctuaries offer a higher degree of protection to species than National Parks.

a) 1 only ✓

b) 2 only ✗

c) Both 1 & 2 ✗

d) Neither 1 & 2 ✗

**Explanation:**

- Statement 1 is correct.

**Biosphere Reserves** are large protected areas under UNESCO's Man and Biosphere (MAB) Programme.

They aim at:

- Conservation of biodiversity
- Sustainable development
- Research and monitoring

They include **core**, **buffer**, and **transition** zones, balancing protection and human activity.

- Statement 2 is incorrect.

The level of protection is:

**National Parks > Wildlife Sanctuaries**

- In **National Parks**, no human activity like grazing or private land rights is permitted.
- In **Wildlife Sanctuaries**, limited human activities may be allowed. Hence, National Parks offer **higher protection**, not Wildlife Sanctuaries.

Q. 126

Which of the following is/are characteristic features of the Gupta period?

- 1- Development of Sanskrit literature and the concept of zero.
- 2- Absence of any major Buddhist or Jain centers.

a) 1 only ✓

b) 2 only ✗

c) Both 1 & 2 ✗

d) Neither 1 & 2 ✗

**Explanation:**

- Statement 1 is correct.

The Gupta period (4th–6th century CE) is known as the **Golden Age of India** because of remarkable achievements in:

- Sanskrit literature (Kalidasa, Vishakhadatta, Sudraka).
- Mathematics, including Aryabhata's work and the formalisation of the concept of zero.
- Advances in astronomy, medicine, art, and architecture.

- Statement 2 is incorrect.

The Gupta age did have important Buddhist and Jain centers.

- Nalanda University (major Buddhist center) flourished under Gupta patronage.
- Jainism also grew, and several Jain manuscripts and temples date to this period.

Thus, it is wrong to say that Buddhist or Jain centers were absent.

Therefore, only Statement 1 is correct.

Q. 127

Which among the following statements is/are correct?

1- The escape velocity of a body from the Earth is independent of the mass of the body.

2- Momentum is a vector quantity, while kinetic energy is a scalar quantity.

a) 1 only X

b) 2 only X

c) Both 1 & 2 ✓

d) Neither 1 & 2 X

**Explanation:**

**Statement 1: Escape velocity is independent of the mass of the body → Correct**

Escape velocity is given by:

$$v = \sqrt{\frac{2GM}{R}}$$

It depends on:

- $G$ : gravitational constant
- $M$ : mass of Earth
- $R$ : radius of Earth

It does NOT depend on the mass of the escaping body.

Thus, the statement is correct.

**Statement 2: Momentum is a vector; kinetic energy is a scalar → Correct**

- **Momentum**  $p = mv$  depends on velocity, which has direction → **Vector quantity**
- **Kinetic energy**  $KE = \frac{1}{2}mv^2$  depends only on magnitude → **Scalar quantity**

So, this statement is also correct.

Q. 128

Which among the following statements is/are correct regarding Acids & Bases?

- 1- Acids turn blue litmus red, and bases turn red litmus blue.
- 2- Common salt (Sodium Chloride) is formed from a reaction between a strong acid and a weak base.

a) 1 only ✓

b) 2 only ✗

c) Both 1 & 2 ✗

d) Neither 1 & 2 ✗

Explanation:

- Statement 1 is correct.

- Acids turn blue litmus → red.
  - Bases turn red litmus → blue.

This is a standard indicator property used in chemistry.

- Statement 2 is incorrect.

Common salt (Sodium Chloride, NaCl) is produced from:

Hydrochloric Acid (strong acid)

+ Sodium Hydroxide (strong base) → NaCl

+ H<sub>2</sub>O

Thus, NaCl is formed from a **strong acid + strong base**, not a weak base.

Therefore, the correct answer is **1 only**.

Q. 129

In which of the Earth's Atmosphere layers does the temperature generally decrease with increasing altitude?

1- Troposphere

2- Stratosphere

3- Mesosphere

a) 1 & 2 only X

b) 2 & 3 only X

c) 1 & 3 only ✓

d) 1, 2 & 3 All X

Explanation:

Temperature behavior in different atmospheric layers:

- **Troposphere:**

Temperature **decreases with height**.

This is where most weather phenomena occur.

- **Stratosphere:**

Temperature **increases with height** due to the ozone layer absorbing UV radiation.

So, stratosphere does not show a decrease.

- **Mesosphere:**

Temperature again **decreases with altitude**, making it the **coldest layer** of the atmosphere.

Thus, temperature decreases with increasing altitude in:

✓ **Troposphere**

✓ **Mesosphere**

Q. 130

Consider the following statements about social and religious reform movements:

- 1- Rammohan Roy is often referred to as the 'Father of Modern India.'
- 2- The Prarthana Samaj advocated for the abolition of the caste system and polygamy.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 & 2
- d) Neither 1 & 2

Explanation:

- Statement 1 is correct.

Raja Rammohan Roy is widely regarded as the 'Father of Modern India' for his pioneering work in social and religious reforms, including the abolition of Sati, promotion of women's rights, rationalism, and modern education.

- Statement 2 is correct.

The Prarthana Samaj, founded in 1867 in Bombay, worked toward abolition of the caste system, discouraging idolatry, women's upliftment, and abolition of polygamy.

Leaders like M. G. Ranade and R. G. Bhandarkar played a vital role in these reforms.

Hence, both statements are correct.