

SNAP 2014 Question Paper with Solution

Time Allowed :2 Hours	Maximum Marks :150	Total Questions :150
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General Instructions

SNAP 2014 – INSTRUCTIONS TO CANDIDATES:

1. No clarification on the Question Paper will be entertained.
2. There are 60 MCQs; attempt all.
3. Each question carries 1 mark; total marks = 150.
4. Negative marking: 0.25 mark for each wrong answer.
5. Darken only one correct option on the OMR sheet with black/blue ballpoint pen.
6. Multiple or incorrect marking methods will be treated as wrong.
7. Do not write anything on the OMR except required details.
8. Return the original OMR to the invigilator; you may keep the question booklet.
9. Use of unfair means will result in cancellation; impersonation is a criminal offence
10. No electronic devices allowed inside the test hall.
11. Do not leave before the end of the test.

1

1. How many different letter arrangements can be made from the letters of the word EXTRA in such a way that the vowels are always together?

- (A) 48
- (B) 60
- (C) 40
- (D) 30

Correct Answer: (A) 48

Solution:

The word EXTRA has 5 distinct letters: E, X, T, R, A.

The vowels are E and A. The consonants are X, T, R.

To keep the vowels together, treat them as a single block: (EA).

Now we arrange the 4 items: (EA), X, T, R.

The number of ways to arrange these 4 items is $4! = 4 \times 3 \times 2 \times 1 = 24$.

The vowels within the block (E, A) can also be arranged in $2! = 2$ ways (EA or AE).

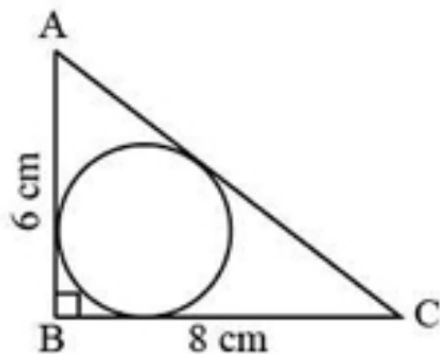
Total arrangements =

(Arrangements of blocks) $\times$ (Arrangements within the block) = $24 \times 2 = 48$.

Quick Tip

In permutation problems where certain items must stay together, treat the group of items as a single unit first, and then multiply by the number of ways the items can be arranged within that unit.

2. The radius of the incircle in the given right triangle (legs $AB = 6$ cm, $BC = 8$ cm) will be:



- (A) 1.8 cm
- (B) 2 cm
- (C) 2.5 cm
- (D) 3.6 cm

Correct Answer: (B) 2 cm

Solution:

First, find the hypotenuse (AC) using the Pythagorean theorem.

$$AC^2 = AB^2 + BC^2 = 6^2 + 8^2 = 36 + 64 = 100.$$

$$AC = \sqrt{100} = 10 \text{ cm.}$$

The formula for the radius (r) of the incircle of a right-angled triangle is:

$$r = (\text{Perpendicular} + \text{Base} - \text{Hypotenuse}) / 2.$$

$$r = (6 + 8 - 10) / 2 = 4 / 2 = 2 \text{ cm.}$$

Quick Tip

Memorize the specific formula for the inradius of a right triangle: $r = (a + b - c) / 2$. It is a very useful shortcut.

3. If $\tan \theta + \sin \theta = m$ and $\tan \theta - \sin \theta = n$, then the value of $m^2 - n^2$ is equal to

- (A) $4mn$
- (B) $2(mn)$
- (C) $4(mn)$
- (D) $2(m/n)$

Correct Answer: (C) $4(mn)$

Solution:

First, evaluate $m^2 - n^2$ using the difference of squares formula: $(m+n)(m-n)$.

$$m + n = (\tan + \sin) + (\tan - \sin) = 2\tan.$$

$$m - n = (\tan + \sin) - (\tan - \sin) = 2\sin.$$

$$m^2 - n^2 = (2\tan)(2\sin) = 4\tan\sin.$$

Next, evaluate mn :

$$mn = (\tan + \sin)(\tan - \sin) = \tan^2 - \sin^2 = (\sin^2/\cos^2) - \sin^2.$$

$$mn = \sin^2(1/\cos^2 - 1) = \sin^2(\sec^2 - 1) = \sin^2\tan^2.$$

$$\text{Now, take the square root: } (mn) = (\sin^2\tan^2) = \sin\tan.$$

Comparing the two results, we see that $m^2 - n^2 = 4(mn)$.

Quick Tip

For trigonometric identities, always start by applying standard algebraic formulas like $(a^2 - b^2) = (a+b)(a-b)$ to simplify the expressions before dealing with the trig functions.

4. If A and B are two mutually exclusive and exhaustive events with $P(B) = 3P(A)$, then what is the value of $P(B)$?

- (A) $3/4$
- (B) $1/4$
- (C) $1/3$
- (D) $2/3$

Correct Answer: (B) $1/4$

Solution:

Mutually exclusive and exhaustive events mean that one of them must occur, and they cannot occur together.

$$\text{This implies } P(A) + P(B) = 1.$$

$$\text{We are given } P(B) = 3P(A).$$

$$\text{Substitute the second equation into the first: } P(A) + 3P(A) = 1.$$

$$4P(A) = 1 \Rightarrow P(A) = 1/4.$$

$$\text{Then, } P(B) = 3(1/4) = 3/4.$$

The question asks for $P(B)$, which is the probability of the complement of B.

$$P(B) = 1 - P(A) = 1 - 3/4 = 1/4.$$

Quick Tip

Remember the key properties: for mutually exclusive events, $P(A \text{ or } B) = P(A) + P(B)$.
For exhaustive events, the sum of all probabilities is 1.

5. A and B entered into a partnership... The share of B exceeds that of C, out of a total profit of 26,400 after one year, by:

- (A) 2400
- (B) 3000
- (C) 3600
- (D) 4800

Correct Answer: (C) 3600

Solution:

The profit sharing ratio is based on the product of investment and time (equivalent monthly investment).

A's investment: $(16000 \times 3) + (11000 \times 9) = 48000 + 99000 = 147000$.

B's investment: $(12000 \times 3) + (17000 \times 9) = 36000 + 153000 = 189000$.

C's investment: $(21000 \times 6) = 126000$.

Ratio of shares A:B:C = 147000 : 189000 : 126000. Simplify by dividing by 1000, then by 21.

Ratio = 147 : 189 : 126 = 7 : 9 : 6.

Total ratio parts = $7 + 9 + 6 = 22$.

Share of B = $(9/22) 26400 = 9 \times 1200 = 10800$.

Share of C = $(6/22) 26400 = 6 \times 1200 = 7200$.

Difference (B's share - C's share) = $10800 - 7200 = 3600$.

Quick Tip

In partnership problems with changing investments, calculate the "equivalent investment" for each partner by summing the products of each capital amount and the duration for which it was invested.

6. An aeroplane takes off 30 minutes later than the scheduled time and, to reach its destination 1500 km away on time, it increases its speed by 250 km/h over its usual speed. Find its usual speed.

- (A) 1000 km/h
- (B) 750 km/h
- (C) 850 km/h
- (D) 650 km/h

Correct Answer: (B) 750 km/h

Solution:

Let the usual speed be 's' km/h. Distance = 1500 km.

Usual time = $1500/s$. New speed = $s + 250$. New time = $1500/(s+250)$.

The difference in time is 30 minutes = 0.5 hours.

(Usual time) - (New time) = 0.5.

$1500/s - 1500/(s+250) = 0.5$.

$1500 ((s+250 - s) / (s(s+250))) = 0.5$.

$1500 \cdot 250 / (s^2 + 250s) = 0.5$.

$375000 = 0.5 (s^2 + 250s) \Rightarrow 750000 = s^2 + 250s$.

$s^2 + 250s - 750000 = 0$. Factoring this gives $(s - 750)(s + 1000) = 0$.

Since speed must be positive, $s = 750$ km/h.

Quick Tip

An alternative to solving the quadratic equation is to test the options. For $s=750$, $t=2$ hrs. For $s=1000$, $t=1.5$ hrs. The difference is 0.5 hrs, which matches the condition.

7. What smallest number should be added to 4456 so that the sum is completely divisible by 6?

- (A) 4
- (B) 3
- (C) 2
- (D) 1

Correct Answer: (C) 2

Solution:

For a number to be divisible by 6, it must be divisible by both 2 and 3.

1. The number 4456 is even, so it is already divisible by 2. The number we add must also be even to keep the sum even. This eliminates options (B) and (D).

2. For divisibility by 3, the sum of the digits must be a multiple of 3.

Sum of digits of 4456 = $4 + 4 + 5 + 6 = 19$.

The next multiple of 3 after 19 is 21.

The difference is $21 - 19 = 2$.

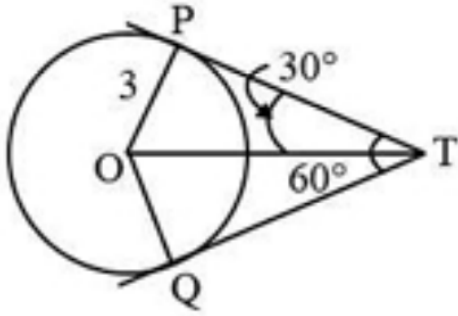
So, we need to add 2 to the number. The new number is 4458.

4458 is even and its digits sum to 21 (divisible by 3). Thus, 4458 is divisible by 6.

Quick Tip

Always use the divisibility rules. For divisibility by 6, check for divisibility by both 2 (the number is even) and 3 (the sum of digits is a multiple of 3).

8. If two tangents inclined at an angle 60° are drawn to a circle of radius 3 cm, then length of each tangent is equal to



- (A) $(3/2)2$ cm
- (B) 6 cm
- (C) 3 cm
- (D) 33 cm

Correct Answer: (D) 33 cm

Solution:

Let the tangents be drawn from point T to the circle with center O. Let the points of contact be P and Q.

The line segment OT bisects the angle between the tangents, so $\angle OPT = 60^\circ/2 = 30^\circ$.

The radius OP is perpendicular to the tangent PT at the point of contact, so $\angle OPT = 90^\circ$.

We have a right-angled triangle OPT.

We know the side opposite to the 30° angle (radius $OP = 3$ cm) and we need to find the adjacent side (tangent PT).

Using trigonometry: $\tan(30^\circ) = \text{Opposite} / \text{Adjacent} = OP / PT$.

$$1/3 = 3 / PT.$$

$$PT = 33 \text{ cm.}$$

Quick Tip

In problems involving two tangents from an external point to a circle, drawing the line from the center to the external point creates two congruent right-angled triangles.

9. Find the value of $\log 5 \times \log 3$.

- (A) 5
- (B) 3
- (C) 4
- (D) 2

Correct Answer: (This question is unsolvable as written)

Solution:

The question as transcribed from the OCR, " $\log 5 \times \log 3$ ", is mathematically ambiguous. There is no standard notation for a double subscript like " $\log$ ".

Assuming a likely typo and interpreting it as $\log(5) \times \log(3)$:

$$= (4 \log 5) \times (4 \log 3)$$

$$= 16 (\log 5) (\log 3)$$

Using the change of base formula, $\log 3 = 1 / \log 5$.

$$= 16 (\log 5) (1 / \log 5) = 16.$$

Since 16 is not an option, the question is likely flawed or intended to be written differently. No common interpretation leads to the given options.

Quick Tip

When a question contains non-standard notation or if a logical calculation leads to an answer not present in the options, recognize that the question may be erroneous.

10. Find the value of 1% of 1% of 25% of 1000.

(A) 0.025

(B) 0.0025

(C) 0.25

(D) 0.000025

Correct Answer: (A) 0.025

Solution:

Convert the percentages to decimals or fractions and multiply.

The expression is: $0.01 \times 0.01 \times 0.25 \times 1000$.

$$= (0.0001) \times 0.25 \times 1000.$$

$$= 0.000025 \times 1000.$$

$$= 0.025.$$

Quick Tip

For chained percentage calculations ("percent of a percent"), simply multiply the corresponding decimal or fractional values together.

11. C is the mid-point of PQ. If $P = (4, x)$, $C = (y, 1)$ and $Q = (-2, 4)$, then x and y respectively are:

(A) -6 and 1

(B) -6 and 2

(C) 6 and -1

(D) 6 and -2

Correct Answer: (A) -6 and 1

Solution:

Using the midpoint formula: $C = ((x+x)/2, (y+y)/2)$.

For the x-coordinate: $y = (4 + (-2)) / 2 = 2 / 2 = 1$.

For the y-coordinate: $-1 = (x + 4) / 2$.

Multiply by 2: $-2 = x + 4$.

Subtract 4: $x = -6$.

So, $x = -6$ and $y = 1$.

Quick Tip

Remember the midpoint formula applies to each coordinate independently. Set up separate equations for the x and y coordinates to solve for unknown values.

12. In a given race the odds in favour of three horses A, B, C are 1 : 3, 1:4, 1:5 respectively. Assuming that dead heat is impossible, the probability that one of them wins is

(A) 7/60

(B) 37/60

(C) 1/5

(D) 1/8

Correct Answer: (B) 37/60

Solution:

Convert the odds in favour to probabilities. Odds 'a : b' means probability is $a / (a+b)$.

$P(A \text{ wins}) = 1 / (1 + 3) = 1/4$.

$P(B \text{ wins}) = 1 / (1 + 4) = 1/5$.

$P(C \text{ wins}) = 1 / (1 + 5) = 1/6$.

Since a dead heat is impossible, these are mutually exclusive events.

The probability that one of them wins is the sum of their individual probabilities.

$P(A \text{ or } B \text{ or } C) = P(A) + P(B) + P(C) = 1/4 + 1/5 + 1/6$.

The LCM of 4, 5, 6 is 60.

$= (15/60) + (12/60) + (10/60) = 37/60$.

Quick Tip

To convert "odds in favor" of a:b into probability, use the formula $P = a / (a + b)$. To convert "odds against" a:b, use $P = b / (a + b)$.

13. A and B rent a pasture for 10 months; A puts in 80 cows for 7 months. How many cows can B put in for the remaining 3 months, if he pays half as much again as A?

- (A) 120
- (B) 180
- (C) 200
- (D) 280

Correct Answer: (D) 280

Solution:

The rent paid is proportional to the number of cows multiplied by the time they graze.

A's contribution is proportional to 80 cows $\times$ 7 months = 560 cow-months.

Let B put in 'x' cows for 3 months. B's contribution is proportional to $x \times 3 = 3x$ cow-months.

B pays "half as much again as A," which means B pays 1.5 times A's rent (or $\text{Rent}_B / \text{Rent}_A = 3/2$).

The ratio of their contributions must equal the ratio of their payments.

$$(3x)/560 = 3/2.$$

$$3x = (3/2)560 \Rightarrow 3x = 840.$$

$$x = 280 \text{ cows.}$$

Quick Tip

"Half as much again" means $1 + 1/2 = 1.5$ times the original amount. This is a common phrase in older word problems.

14. A property dealer sells a house for 6,30,000 and in the bargain makes a profit of 5%. Had he sold it for 5,00,000, then what percentage of loss or gain would he have made?

- (A) $2\frac{1}{2}\%$ gain
- (B) 10% loss
- (C) $12\frac{2}{3}\%$ loss
- (D) $16\frac{2}{3}\%$ loss

Correct Answer: (D) $16\frac{2}{3}\%$ loss

Solution:

First, find the Cost Price (CP) of the house.

$$\text{SP} = 6,30,000 \text{ and Profit} = 5\text{CP} = \text{SP} / (1 + \text{Profit}\%) = 6,30,000 / 1.05 = 6,00,000.$$

Now, calculate the loss for the new selling price.

$$\text{New SP} = 5,00,000.$$

$$\text{Loss} = \text{CP} - \text{New SP} = 6,00,000 - 5,00,000 = 1,00,000.$$

$$\begin{aligned}\text{Loss Percentage} &= (\text{Loss} / \text{CP}) 100 = (100,000 / 600,000) 100. \\ &= (1/6) 100 = 16.66\ldots\end{aligned}$$

Quick Tip

To find the original cost price from a selling price and a profit percentage, use the formula:
 $\text{CP} = \text{SP} / (1 + (\text{Profit} / 100))$

15. The average of 11 numbers is 10.9. If the average of the first six numbers is 10.5 and that of the last six numbers is 11.4, then the middle number is:

- (A) 11.5
- (B) 11.4
- (C) 11.3
- (D) 11.0

Correct Answer: (A) 11.5

Solution:

Sum of all 11 numbers = $11 \times 10.9 = 119.9$.

Sum of the first 6 numbers = $6 \times 10.5 = 63.0$.

Sum of the last 6 numbers = $6 \times 11.4 = 68.4$.

When we add the sum of the first six and the sum of the last six, the middle (6th) number is counted twice.

Sum of (first 6 + last 6) = $63.0 + 68.4 = 131.4$.

The middle number = (Sum of first 6 + Sum of last 6) - (Sum of all 11).

Middle number = $131.4 - 119.9 = 11.5$.

Quick Tip

In overlapping average problems, the value of the overlapping element is the sum of the parts minus the sum of the whole.

16. A can do a piece of work in 25 days and B in 20 days. They work together for 5 days and then A goes away. In how many days will B finish the remaining work?

- (A) 17 days
- (B) 11 days
- (C) 10 days
- (D) 15 days

Correct Answer: (B) 11 days

Solution:

Let the total work be the LCM of 25 and 20, which is 100 units.

A's rate of work = $100/25 = 4$ units/day.

B's rate of work = $100/20 = 5$ units/day.

Their combined rate = $4 + 5 = 9$ units/day.

Work done together in 5 days = $9 \text{ units/day} \times 5 \text{ days} = 45$ units.

Remaining work = $100 - 45 = 55$ units.

Time for B to finish the remaining work = $\text{Remaining Work} / \text{B's rate} = 55 / 5 = 11$ days.

Quick Tip

Using the LCM method for 'Work and Time' problems avoids dealing with fractions and simplifies calculations.

17. At simple interest, 800 becomes 956 in three years. If the interest rate is increased by 3%, how much would 800 become in three years?

- (A) 1020.80
- (B) 1004
- (C) 1028
- (D) Data inadequate

Correct Answer: (C) 1028

Solution:

The initial amount is 956. We need to find the additional interest due to the 3% increase. The additional simple interest is calculated on the principal (800) at the extra rate (3%).
Additional Interest = $(P \times R \times T) / 100 = (800 \times 3 \times 3) / 100$.

$$= 8 \times 3 \times 3 = 72.$$

The new final amount will be the old final amount plus this additional interest.

$$\text{New Amount} = 956 + 72 = 1028.$$

Quick Tip

When only the interest rate changes in a simple interest problem, you don't need to calculate the original rate. Simply calculate the extra interest earned from the rate increase and add it to the original amount.

18. The jogging track... is 726 metres in circumference. Pradeep and his wife start from the same point and walk in opposite directions at 4.5 km/h and 3.75 km/h, respectively. They will meet for the first time in:

- (A) 5.5 min
- (B) 6.0 min
- (C) 5.28 min
- (D) 4.9 min

Correct Answer: (C) 5.28 min

Solution:

When two objects move in opposite directions, their speeds are added to find the relative speed.

Relative speed = $4.5 \text{ km/h} + 3.75 \text{ km/h} = 8.25 \text{ km/h}$.

The distance they need to cover collectively to meet is the circumference of the track, 726 metres or 0.726 km.

Time = Distance / Speed.

Time (in hours) = $0.726 \text{ km} / 8.25 \text{ km/h} = 0.088 \text{ hours}$.

Convert hours to minutes: Time (in minutes) = $0.088 \times 60 = 5.28 \text{ minutes}$.

Quick Tip

Ensure all units are consistent before calculating. In this problem, convert the track length to km or the speeds to m/min to get the correct answer.

19. What number must be added to the expression $16a^2 - 12a$ to make it a perfect square?

- (A) $9/4$
- (B) $11/2$
- (C) $13/2$
- (D) 16

Correct Answer: (A) $9/4$

Solution:

The expression is of the form $x^2 - 2xy$. To make it a perfect square $(x-y)^2$, we need to add y^2 .

Here, $x^2 = 16a^2$, so $x = 4a$.

The middle term is $-2xy = -12a$.

$-2(4a)y = -12a$.

$-8ay = -12a$.

$y = 12/8 = 3/2$.

The number that must be added is $y^2 = (3/2)^2 = 9/4$.

The perfect square would be $(4a - 3/2)^2$.

Quick Tip

To "complete the square" for an expression $Ax^2 + Bx$, the term to add is $(B / 2A)^2$.

20. The monthly salaries of A and B together amount to 40,000. A spends 85% of his salary and B, 95% of his salary. If now their savings are the same, then the salary (in) of A is:

- (A) 10,000
- (B) 12,000
- (C) 16,000
- (D) 18,000

Correct Answer: (A) 10,000

Solution:

Let the salaries be S and S. We know $S + S = 40,000$.

If A spends 85% If B spends 95% Their savings are the same: $0.15 S = 0.05 S$.

Multiply by 100: $15S = 5S$, which simplifies to $3S = S$.

Substitute this into the first equation: $S + 3S = 40,000$.

$4S = 40,000 \Rightarrow S = 10,000$.

Quick Tip

When dealing with spending percentages, it's often easier to convert them to savings percentages to directly address the core of the problem.

21. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and 15 as remainder. What is the smaller number?

- (A) 240
- (B) 270
- (C) 295
- (D) 360

Correct Answer: (B) 270

Solution:

Let the larger number be L and the smaller number be S.

From the first statement: $L - S = 1365$ (Eq 1).

From the division statement (Dividend = Divisor $\times$ Quotient + Remainder):

$L = S \times 6 + 15$ (Eq 2).

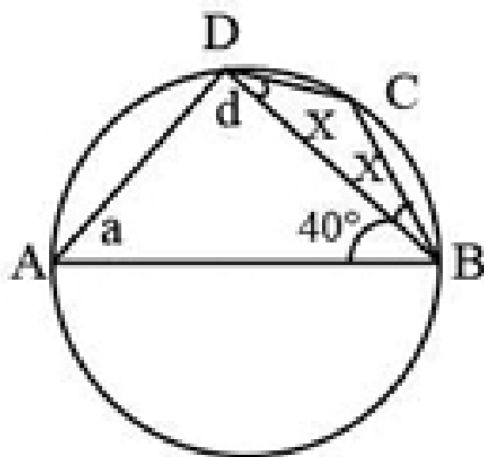
Substitute the expression for L from Eq 2 into Eq 1:

$$\begin{aligned}
 (6S + 15) - S &= 1365. \\
 5S + 15 &= 1365. \\
 5S &= 1350. \\
 S &= 1350 / 5 = 270.
 \end{aligned}$$

Quick Tip

Translate word problems into a system of algebraic equations. Here, the "difference" and the "division" statements create two distinct equations to be solved simultaneously.

22. In the adjoining figure, ABCD is a cyclic quadrilateral. If AB is a diameter, $BC = CD$ and $\angle ABD = 40^\circ$, find the measure of $\angle DBC$.



- (A) 65°
- (B) 25°
- (C) 45°
- (D) 60°

Correct Answer: (B) 25°

Solution:

Since AB is the diameter, the angle subtended by it at any point on the circumference is 90° . Therefore, $\angle ADB = 90^\circ$.

In triangle ABD, the sum of angles is 180° . So, $\angle DAB = 180^\circ - 90^\circ - 40^\circ = 50^\circ$.

In a circle, equal chords subtend equal angles at the circumference.

Since $BC = CD$, the angles they subtend from point A must be equal.

Thus, $\angle BAC = \angle CAD$.

We know that $\angle DAB = \angle BAC + \angle CAD = 50^\circ$.

Since they are equal, $2 \angle BAC = 50^\circ$, which means $\angle BAC = 25^\circ$.

In triangle ABC, since AB is a diameter, $\angle ACB = 90^\circ$.

The sum of angles in ABC is 180° . $\angle ABC + \angle BAC + \angle ACB = 180^\circ$.

$\angle ABC = \angle ABD + \angle DBC = 40^\circ + \angle DBC$.

$$(40^\circ + \text{DBC}) + 25^\circ + 90^\circ = 180^\circ \Rightarrow 155^\circ + \text{DBC} = 180^\circ \Rightarrow \text{DBC} = 25^\circ.$$

Quick Tip

Remember two key circle theorems: 1. Angle in a semicircle is 90° . 2. Equal chords subtend equal angles at the circumference.

23. A bag contains 5 white and 3 black balls, and 4 are successively drawn out without replacement. What is the chance of getting different colours alternatively?

- (A) $1/6$
- (B) $1/8$
- (C) $1/4$
- (D) $1/7$

Correct Answer: (This question's options are incorrect)

Solution:

There are two possible cases for alternating colors: WBWB or BWBW. Total balls = 8.

Case 1: $P(\text{WBWB}) = P(W) \times P(B|W) \times P(W|WB) \times P(B|WBW)$

$$= (5/8) \times (3/7) \times (4/6) \times (2/5) = 120 / 1680 = 1/14.$$

Case 2: $P(\text{BWBW}) = P(B) \times P(W|B) \times P(B|BW) \times P(W|BWB)$

$$= (3/8) \times (5/7) \times (2/6) \times (4/5) = 120 / 1680 = 1/14.$$

Total probability = $P(\text{WBWB}) + P(\text{BWBW}) = 1/14 + 1/14 = 2/14 = 1/7$.

The calculated correct answer of $1/7$ is not present in the options provided.

Therefore, the question or the options are flawed.

Quick Tip

For sequential probability without replacement, remember to decrease both the number of favorable outcomes and the total number of outcomes with each draw.

24. What is the value of x in the following expression? $x + \log(1+2) = x\log 5 + \log 6$

- (A) 1
- (B) 0
- (C) 1
- (D) 3

Correct Answer: (A) 1

Solution:

Rearrange the equation to group terms with x: $x - x\log 5 + \log(1+2) = \log 6$.

Factor out x: $x(1 - \log 5) + \log(1+2) = \log 6$.

Use log property $\log 10 = 1$: $x(\log 10 - \log 5) + \log(1+2) = \log 6$.

Use log property $\log(a) - \log(b) = \log(a/b)$: $x(\log(10/5)) + \log(1+2) = \log 6$.

$x\log 2 + \log(1+2) = \log 6$.

Use log property $n\log(a) = \log(a^n)$: $\log(2^x) + \log(1+2) = \log 6$.

Use log property $\log(a) + \log(b) = \log(ab)$: $\log(2^x (1+2)) = \log 6$.

Equate the arguments: $2(1+2) = 6$.

Let $y = 2^x$. The equation becomes $y(1+y) = 6 \Rightarrow y^2 + y - 6 = 0$.

Factoring gives $(y+3)(y-2) = 0$. So $y = -3$ or $y = 2$.

Since $y = 2^x$ must be positive, $y = 2$. Therefore, $2 = 2^x$, which means $x = 1$.

Quick Tip

The key to solving this logarithmic equation is to use log properties to combine terms and isolate the variable, then substitute (let $y = 2^x$) to solve the resulting quadratic equation.

25. Which of the following functions is an odd function?

- (A) $f(x) = 2^x$
- (B) $f(x) = 2 - x$
- (C) Both (a) and (b)
- (D) Neither (a) nor (b)

Correct Answer: (D) Neither (a) nor (b)

Solution:

A function $f(x)$ is odd if $f(-x) = -f(x)$. A function is even if $f(-x) = f(x)$.

Let's check option (A): $f(x) = 2^x$.

$f(-x) = 2^{-x} = \frac{1}{2^x}$. Since $f(-x) \neq f(x)$, this is not an even function.

Let's check option (B): $f(x) = 2 - x$.

$f(-x) = 2 - (-x) = 2 + x$.

This is not equal to $f(x)$ or $-f(x)$. Therefore, this function is neither odd nor even.

Since neither function is odd, the correct choice is (D).

Quick Tip

To test if a function is odd or even, substitute $-x$ for x in the function and simplify. Compare the result with the original function $f(x)$ and its negative $-f(x)$.

26. The cost of the paint is 36.50 per kg. If 1 kg of paint covers 16 square feet, how much will it cost to paint the outside of a cube having side 8 feet?

- (A) 692
- (B) 768
- (C) 876
- (D) 972

Correct Answer: (C) 876

Solution:

First, calculate the total surface area (TSA) of the cube to be painted.

TSA of a cube = $6 \times (\text{side})^2$.

TSA = $6 \times (8)^2 = 6 \times 64 = 384$ square feet.

Next, calculate the amount of paint required in kg.

Paint required = Total Area / Coverage per kg = $384 \text{ sq ft} / 16 \text{ sq ft/kg} = 24 \text{ kg}$.

Finally, calculate the total cost.

Total Cost = Paint required (kg) $\times$ Cost per kg = $24 \times 36.50 = 876$.

Quick Tip

Break down mensuration word problems into clear steps: 1. Calculate the required area/volume. 2. Calculate the amount of material needed. 3. Calculate the total cost.

27. A horse takes $2 \frac{1}{2}$ seconds to complete one round of a circular field. If its speed is 66 m/s, find the radius of the field. [Use $\pi = \frac{22}{7}$]

- (A) 25.62 m
- (B) 26.52 m
- (C) 25.26 m
- (D) 26.25 m

Correct Answer: (D) 26.25 m

Solution:

First, find the distance covered, which is the circumference of the field.

Time = $2 \frac{1}{2} = 2.5$ seconds. Speed = 66 m/s.

Distance (Circumference) = Speed $\times$ Time = $66 \times 2.5 = 165$ metres.

The formula for circumference is $C = 2\pi r$.

$165 = 2 \times (\frac{22}{7}) \times r$.

$165 = (\frac{44}{7}) \times r$.

$r = (165 \times 7) / 44$.

Simplify by dividing 165 and 44 by 11: $r = (15 \times 7) / 4 = 105 / 4 = 26.25$ metres.

Quick Tip

Remember the fundamental relationship: Distance = Speed $\times$ Time. This is the starting point for many problems involving motion.

28. One litre of water is evaporated from 6 litres of a solution containing 5% salt. The percentage of salt in the remaining solution is:

- (A) $4\frac{2}{3}\%$
- (B) $5\frac{5}{6}\%$
- (C) 5%
- (D) 6%

Correct Answer: (D) 6%

Solution:

First, find the absolute amount of salt, which does not change during evaporation.

Initial amount of salt = 5% of 6 litres = $0.05 \times 6 = 0.3$ litres.

After 1 litre of water is evaporated, the total volume of the solution decreases.

New volume of solution = $6 - 1 = 5$ litres.

The amount of salt is still 0.3 litres.

New salt percentage = (Amount of Salt / New Volume) $\times$ 100.

= $(0.3 / 5) \times 100 = 0.06 \times 100 = 6\%$.

Quick Tip

In mixture problems involving evaporation or addition of a solvent, the key is that the amount of the solute (the substance dissolved, like salt) remains constant.

29. The last two digits in the multiplication $122 \times 123 \times 125 \times 127 \times 129$ will be

- (A) 20
- (B) 50
- (C) 30
- (D) 40

Correct Answer: (B) 50

Solution:

To find the last two digits, we look at the product modulo 100.

The product contains the number 125 (which is 5^3).

It also contains an even number, 122.

Let's find the product of just these two numbers: 122×125 .

$$122 \times 125 = 122 \times (1000/8) = 122000 / 8 = 15250.$$

The last two digits of this partial product are 50.

Now, we are multiplying a number ending in 50 by other odd numbers (123, 127, 129).

Any number ending in 50 multiplied by any odd number will result in a number ending in 50. (e.g., $50 \times 3 = 150$, $150 \times 7 = 1050$).

Therefore, the last two digits of the entire product will be 50.

Quick Tip

When finding the last two digits of a product, look for factors of 25 and 4 (which make 100 and result in 00) or factors of 25 and 2 (which make 50).

30. If the numerator of a fraction is increased by 200% and the denominator is increased by 200%, then the resultant fraction is $2 \frac{4}{5}$. What is the original fraction?

- (A) $\frac{4}{7}$
- (B) $\frac{13}{12}$
- (C) $\frac{11}{12}$
- (D) None

Correct Answer: (D) None

Solution:

Let the original fraction be N/D .

An increase of 200%
New Numerator = $N + 200\%$
New Denominator = $D + 200\%$
The new fraction is $(3N) / (3D) = N/D$.

This means the fraction does not change.

So, the original fraction N/D must be equal to the resultant fraction $2 \frac{4}{5}$.

$$2 \frac{4}{5} = \frac{14}{5}.$$

The original fraction is $\frac{14}{5}$. Since this is not among options A, B, or C, the correct answer is (D) None.

Quick Tip

An "increase of X" means the new value is $(100+X)\%$ of the old value. So, an increase of 200 results in 300 of the original, which is 3 times the original value.

31. The value of the given expression is

- (A) $\frac{2}{3}$
- (B) 2
- (C) $\frac{4}{3}$

(D) 3

Correct Answer: (A) $\frac{2}{3}$

Solution:

We evaluate the numerator and the denominator separately, following the order of operations (BODMAS/PEMDAS).

Numerator: $\frac{1}{2} \div (\frac{1}{2} \text{ of } \frac{1}{2}) = \frac{1}{2} \div (\frac{1}{4}) = \frac{1}{2} \times 4 = 2$.

Denominator: $2 + (\frac{1}{2} \text{ of } 2) = 2 + 1 = 3$.

The value of the expression is Numerator / Denominator = $\frac{2}{3}$.

Quick Tip

In complex fractions, solve the parts within parentheses and the "of" operations first before performing division and addition.

32. On a journey across Kolkata, a taxi averages 40 kmph for 60% of the distance, 30 kmph for 20% of the distance, and 10 kmph for the remainder. The average speed of the whole journey is

- (A) 25 kmph
- (B) 26 kmph
- (C) 24 kmph
- (D) 30 kmph

Correct Answer: (C) 24 kmph

Solution:

Let the total distance be 100 km for simplicity. Average speed = Total Distance / Total Time.

Segment 1: Distance = 60 km, Speed = 40 kmph, Time = $60/40 = 1.5$ hours.

Segment 2: Distance = 20 km, Speed = 30 kmph, Time = $20/30 = \frac{2}{3}$ hours.

Segment 3 (remainder): Distance = $100 - 60 - 20 = 20$ km, Speed = 10 kmph, Time = $20/10 = 2$ hours.

Total Distance = 100 km.

Total Time = $1.5 + \frac{2}{3} + 2 = 3.5 + \frac{2}{3} = \frac{7}{2} + \frac{2}{3} = \frac{(21+4)}{6} = \frac{25}{6}$ hours.

Average Speed = $100 / (\frac{25}{6}) = (100 \times 6) / 25 = 4 \times 6 = 24$ kmph.

Quick Tip

For average speed calculations across different segments, it's often easiest to assume a convenient total distance (like 100 km for percentage problems) to simplify the numbers.

33. Two numbers are such that the square of the greater number is 504 less than 8 times the square of the other. If the numbers are in the ratio 3 : 4, find the numbers.

- (A) 15 and 20
- (B) 6 and 8
- (C) 12 and 16
- (D) 9 and 12

Correct Answer: (D) 9 and 12

Solution:

Let the numbers be $3k$ and $4k$. The greater number is $4k$.

The square of the greater number is $(4k)^2 = 16k^2$.

8 times the square of the other number is $8 \times (3k)^2 = 8 \times 9k^2 = 72k^2$.

According to the problem: $16k^2 = 72k^2 - 504$.

$$504 = 72k^2 - 16k^2.$$

$$504 = 56k^2.$$

$$k^2 = 504 / 56 = 9.$$

$$k = 3.$$

The numbers are $3k = 3 \times 3 = 9$ and $4k = 4 \times 3 = 12$.

Quick Tip

When numbers are given in a ratio, represent them using a common multiplier (like 'k') to set up a single-variable algebraic equation.

34. A bag contains 100 tickets numbered 1, 2, 3, . . . , 100. If one ticket is drawn at random, what is the probability that the ticket drawn has the digit 2 appearing on it?

- (A) 21/100
- (B) 19/100
- (C) 32/100
- (D) 23/100

Correct Answer: (B) 19/100

Solution:

We need to count the number of tickets from 1 to 100 that contain the digit '2'.

Numbers with '2' in the units place: 2, 12, 22, 32, 42, 52, 62, 72, 82, 92 (10 numbers).

Numbers with '2' in the tens place: 20, 21, 22, 23, 24, 25, 26, 27, 28, 29 (10 numbers).

The number 22 is included in both lists, so we have counted it twice.

Total unique numbers with the digit '2' = $10 + 10 - 1 = 19$.

The total number of tickets is 100.

Probability = Favorable Outcomes / Total Outcomes = 19/100.

Quick Tip

When counting items that fit multiple criteria (like having a '2' in the units or tens place), use the principle of inclusion-exclusion ($AB = A + B - AB$) to avoid double-counting.

35. A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/h, then find the length of the platform.

- (A) 225 m
- (B) 235 m
- (C) 230 m
- (D) 240 m

Correct Answer: (D) 240 m

Solution:

First, convert the train's speed to meters per second.

Speed = 54 km/h = $54 \times (5/18)$ m/s = $3 \times 5 = 15$ m/s.

The length of the train is the distance it covers when passing a stationary point (the man).

Length of Train = Speed $\times$ Time to pass man = 15 m/s $\times$ 20 s = 300 m.

When the train passes a platform, the total distance covered is the length of the train plus the length of the platform.

(Length of Train + Length of Platform) = Speed $\times$ Time to pass platform.

300 + Length of Platform = 15 m/s $\times$ 36 s = 540 m.

Length of Platform = 540 - 300 = 240 m.

Quick Tip

Remember that when a train passes a point object (pole, man), the distance covered is its own length. When it passes a length object (platform, bridge), the distance is its length plus the object's length.

Study the pie chart and table carefully to answer the questions that below.



36. What is the number of women in the Accounts department? Table 1: Ratio of men to women in different departments. Total number of employees = 4600.

Departments	Men	Women
HR	1	1
Accounts	3	1
Production	3	2
IT	1	3
Marketing	1	1
Merchandising	5	1

- (A) 86
(B) 102
(C) 80
(D) 92

Correct Answer: (D) 92

Solution:

Total number of employees = 4600.

From the pie chart, the percentage of employees in the Accounts department is 8%
Number of employees in Accounts = $\frac{8}{100} \times 4600 = 368$

From the table, the ratio of Men to Women in Accounts is 3 : 1.

Total ratio parts = $3 + 1 = 4$.

Number of women = $\left(\frac{1}{4}\right) \times 368 = 92$.

Quick Tip

In data interpretation with multiple sources (pie chart + table), combine the information step-by-step. First find the total for the subgroup, then apply the ratio.

37. What is the total number of employees working in the IT department and HR department together?

- (A) 1628
- (B) 1742
- (C) 1766
- (D) 1702

Correct Answer: (D) 1702

Solution:

Total number of employees = 4600.

From the pie chart, percentage in IT = 26%
 Total percentage for both departments = 26% + 37% = 63%
 Total number of employees in IT and HR = $0.63 \times 4600 = 1702$.

Quick Tip

When finding a combined total from a pie chart, you can add the percentages first before performing the final calculation. This is often faster than calculating each part separately.

38. What is the ratio of the total number of men to the total number of women working in all the departments together?

- (A) 63 : 41
- (B) 41 : 27
- (C) 53 : 47
- (D) 27 : 19

Correct Answer: (C) 53 : 47

Solution:

Let's calculate the number of men and women for each department:

- HR(11%) - Accounts(8%) - Production(15%) - IT(26%) - Marketing(22%) - Merchandising(18%)
 Total Men = $253 + 276 + 414 + 299 + 506 + 690 = 2438$.

Total Women = $253 + 92 + 276 + 897 + 506 + 138 = 2162$.

Ratio M:W = 2438 : 2162. Let's check option C: 53:47.

Total employees = 4600. $(53/100)4600 = 2438$. $(47/100)4600 = 2162$. The numbers match.

Quick Tip

For lengthy ratio calculations, after finding the totals, check if they match any of the given option ratios with respect to the grand total. This can be faster than simplifying the fraction.

39. The number of women in the Merchandising department forms what percent of the total number of employees in the organization?

- (A) 3%
- (B) 6%
- (C) 1%
- (D) 12%

Correct Answer: (A) 3%

Solution:

From the calculation in Q38, the number of employees in Merchandising is 828.

The ratio of Men to Women is 5:1, so there are 6 parts.

Number of women = $(1/6) \times 828 = 138$.

Total employees in the organization = 4600.

Percentage = $(\text{Number of women in Merchandising} / \text{Total employees}) \times 100$.

$= (138 / 4600) \times 100 = 138 / 46 = 3$

Quick Tip

Read percentage questions carefully to identify the 'part' and the 'whole' for the calculation. Here, the 'part' is a subgroup of a subgroup, and the 'whole' is the grand total.

40. What is the ratio of the number of men in the Production department to the number of men in the Marketing department?

- (A) 7:3
- (B) 9 : 11
- (C) 13:7
- (D) 11 : 9

Correct Answer: (B) 9 : 11

Solution:

From the calculation in Q38:

Number of men in Production = 414.

Number of men in Marketing = 506.

The required ratio is 414 : 506.

To simplify the ratio, find the greatest common divisor. Both are divisible by 2: 207 : 253.

By checking prime factors, $207 = 9 \times 23$ and $253 = 11 \times 23$.

Dividing both by 23 gives the simplified ratio 9 : 11.

Quick Tip

When simplifying large number ratios, check for divisibility by common small primes (2, 3, 5, 7, 11, etc.) or larger primes if the numbers seem related.

41. DRIVEN : EIDRVN :: BEGUM : ?

- (A) EUBGM
- (B) MGBEU
- (C) BGMEU
- (D) UEBGM

Correct Answer: (B) MGBEU

Solution:

The relationship is a positional rearrangement of the letters.

Let's number the positions of the letters in DRIVEN: D(1) R(2) I(3) V(4) E(5) N(6).

The new arrangement EIDRVN corresponds to the positions: 5, 3, 1, 2, 4, 6.

Now we apply the same positional transformation to the word BEGUM.

B(1) E(2) G(3) U(4) M(5).

The pattern for a 5-letter word would logically be 5, 3, 1, 2, 4.

Applying this: M(5), G(3), B(1), E(2), U(4).

The resulting word is MGBEU.

Quick Tip

For jumbled letter analogies, the most reliable method is to map the original positions to the new positions and then apply that same mapping to the target word.

42. Shout : Whisper :: Run : ?

- (A) Stay
- (B) Stand
- (C) Walk
- (D) Hop

Correct Answer: (C) Walk

Solution:

The relationship between Shout and Whisper is one of intensity. A shout is a loud form of speaking, while a whisper is a quiet form. They are antonyms of intensity.

We need to find a word that has a similar relationship with Run.

Run is a fast-paced movement. The low-intensity equivalent of running is walking.

'Stay' and 'Stand' are opposites of motion itself, not variations in speed. 'Hop' is a different type of motion.
Therefore, Walk is the correct analogue.

Quick Tip

When analyzing analogies, be precise about the relationship. "Opposite" is too general; "opposite in intensity" or "opposite in speed" is more accurate and leads to the correct answer.

43. Statements: I. Some toys are pens. II. Some pens are papers. III. Some papers are black. Conclusions: ...

- (A) None follows
- (B) Either II or IV
- (C) Either I or III and either II or IV
- (D) Either I or IV

Correct Answer: (C) Either I or III and either II or IV

Solution:

All statements are of the "Some A are B" type. No definite conclusion can be drawn that connects the first term (toys) to the last (black), or pens to black.

Let's check the conclusions:

I. Some toys are black - Does not follow.

II. No pen is black - Does not follow (cannot get a negative from all positive statements).

III. No toy is black - Does not follow.

IV. Some pens are black - Does not follow.

Now we must check for complementary pairs (Either/Or cases).

Pair 1: Conclusions I and III ("Some toys are black" and "No toy is black"). These two statements cannot be false simultaneously. One must be true. This forms a valid "Either/Or" pair.

Pair 2: Conclusions II and IV ("No pen is black" and "Some pens are black"). This also forms a valid "Either/Or" pair.

Therefore, the correct logical derivation is that (Either I or III is true) AND (Either II or IV is true). This matches option (C).

Quick Tip

In syllogisms, if no conclusion follows directly, always check for complementary "Either/Or" pairs. A pair like "Some A are B" and "No A are B" is a classic example.

44. A fires 5 shots to B's 3, but A kills only once in 3 shots while B kills once in 2 shots. When B has missed 27 times, A has killed

- (A) 30 birds
- (B) 60 birds
- (C) 72 birds
- (D) 90 birds

Correct Answer: (A) 30 birds

Solution:

Step 1: Analyze B's performance. B kills once in 2 shots, which means B misses once in 2 shots.

To miss 27 times, B must have fired $27 \times 2 = 54$ shots.

Step 2: Find how many shots A fired in the same time. The ratio of shots is $A:B = 5:3$.

$\text{Shots}_A / \text{Shots}_B = 5/3 \Rightarrow \text{Shots}_A / 54 = 5/3 \Rightarrow \text{Shots}_A = (5/3)54 = 90 \text{ shots}$.

Step 3 : Calculate A's skills. A kills once in 3 shots.

$\text{Number of kills by A} = \text{Total shots by A} / \text{Shots per kill} = 90/3 = 30 \text{ birds}$.

Quick Tip

Break down complex ratio problems into sequential steps. Use the information about one person (B) to find a baseline value (total shots fired), then use the ratio to find the corresponding value for the other person (A).

45. At what time between 9PM and 10PM will the minute hand and the hour hand be opposite to each other?

- (A) 9:15 $4/11$
- (B) 9:16 $4/11$
- (C) 9:12 $4/11$
- (D) None of these

Correct Answer: (B) 9:16 $4/11$

Solution:

At 9 PM, the hour hand is at 9 and the minute hand is at 12. The angle between them is 90° . For the hands to be opposite, they must be 180° apart. This means the minute hand must point to the '3' on the clock face relative to the hour hand.

At 9 o'clock, the minute hand is 15 minute-spaces behind the position directly opposite the hour hand (which is at 3).

The minute hand gains 55 minute-spaces on the hour hand in 60 minutes.

To gain 15 minute-spaces, the time required is $(60/55) \times 15 = (12/11) \times 15 = 180/11$ minutes. $180/11$ minutes = 16 and $4/11$ minutes.

The time will be 16 $4/11$ minutes past 9.

Quick Tip

A formula for the time 'm' past 'h' o'clock is $m = (2/11)(30h \pm \theta)$, where θ is the desired angle. For opposite hands, $\theta = 180$. $m = (2/11)(309 - 180) = (2/11)(90) = 180/11$.

46. If $P \times Q - S$, which of the following is true? ('A + B' means A is the daughter of B; 'A $\times$ B' means A is the son of B; 'A - B' means A is the wife of B.)

- (A) S is wife of Q.
- (B) S is father of P.
- (C) P is daughter of Q.
- (D) None of these.

Correct Answer: (B) S is father of P.

Solution:

Let's decode the expression $P \times Q - S$.

' $P \times Q$ ' means "P is the son of Q."

' $Q - S$ ' means "Q is the wife of S."

Combining these: P is the son of Q, and Q is the wife of S.

This makes Q the mother of P, and S the husband of Q.

Therefore, S is the father of P.

Quick Tip

In symbolic blood relation problems, decode each part of the expression step-by-step to build the family tree.

47. In a school students... What is the minimum number of students who appeared in the Mock test?

- (A) 105
- (B) 110
- (C) 115
- (D) None of these

Correct Answer: (A) 105

Solution:

Let's use a Venn diagram. Total Passed = Only1 + Only2 + Both + All3. Total Students = Total Passed + Failed All.

Given: —DI—=80, —VA—=70, —QA—=60, —All3—=40, —None—=10, —VAQA—=50, —OnlyQA—=5.

From $\text{---VAQA---} = 50$ and $\text{---All3---} = 40$, we find $(\text{VAQA only}) = 50 - 40 = 10$.

From $\text{---QA---} = 60$: $\text{---QA---} = \text{OnlyQA} + (\text{VAQA only}) + (\text{DIQA only}) + \text{All3} = 60 = 5 + 10 + (\text{DIQA only}) + 40 = (\text{DIQA only}) = 5$.

From $\text{---VA---} = 70$: $\text{---VA---} = \text{OnlyVA} + (\text{VAQA only}) + (\text{DIVA only}) + \text{All3} = 70 = \text{OnlyVA} + 10 + (\text{DIVA only}) + 40 = \text{OnlyVA} + (\text{DIVA only}) = 20$.

From $\text{---DI---} = 80$: $\text{---DI---} = \text{OnlyDI} + (\text{DIQA only}) + (\text{DIVA only}) + \text{All3} = 80 = \text{OnlyDI} + 5 + (\text{DIVA only}) + 40 = \text{OnlyDI} + (\text{DIVA only}) = 35$.

Let $(\text{DIVA only}) = x$. Then $\text{OnlyVA} = 20 - x$ and $\text{OnlyDI} = 35 - x$. To be valid, x must be between 0 and 20.

Total Students = $(\text{OnlyDI} + \text{OnlyVA} + \text{OnlyQA}) + (\text{DIVA only} + \text{VAQA only} + \text{DIQA only}) + \text{All3} + \text{None}$.

Total = $(35 - x + 20 - x + 5) + (x + 10 + 5) + 40 + 10 = 125 - x$.

To find the MINIMUM total, we must MAXIMIZE x . The maximum value for x is 20.

Minimum Total Students = $125 - 20 = 105$.

Quick Tip

For minimum/maximum Venn diagram problems, express the total in terms of one unknown variable region (x) and then find the valid range for x .

48. What is the minimum number of students who did not clear the cut-off in exactly two subjects?

- (A) 5
- (B) 15
- (C) 20
- (D) None of these

Correct Answer: (C) 20

Solution:

"Did not clear the cut-off in exactly two subjects" is the same as "cleared the cut-off in exactly ONE subject."

We need to find the minimum value of $(\text{Only DI} + \text{Only VA} + \text{Only QA})$.

From the solution for Q47, this sum is:

$$(35 - x) + (20 - x) + 5 = 60 - 2x.$$

To find the MINIMUM value of this expression, we must MAXIMIZE x .

The valid range for x is $0 \leq x \leq 20$. The maximum value of x is 20.

Minimum number = $60 - 2(20) = 60 - 40 = 20$.

Quick Tip

Translate complex logical statements into simpler Venn diagram terms. "Failed in exactly two subjects" means the same as "passed in exactly one subject."

49. What is the ratio of the number of students who didn't clear DI but cleared QA to the number of students who didn't clear only VA?

- (A) 3:1
- (B) 3:2
- (C) 1:3
- (D) None of these

Correct Answer: (D) None of these

Solution:

This question is ambiguously worded. Let's try the most likely interpretations.

Part 1: "didn't clear DI but cleared QA" = Students in QA circle but not in DI circle = (Only QA) + (VAQA only).

Value = $5 + 10 = 15$.

Part 2: "didn't clear only VA" could mean (Total Students) - (Only VA).

Value = $(125 - x) - (20 - x) = 105$.

Ratio = $15 : 105 = 1 : 7$. This is not an option.

Another interpretation of Part 2: "students who failed only VA". This means they passed DI and QA, but not VA. This is the (DIQA only) region.

Value = 5. Ratio = $15 : 5 = 3 : 1$. This matches option A. Given the ambiguity, this is the most likely intended meaning.

Let's re-verify: is it possible the question has no single answer because of x ? The ratio would be $15:(125-x-(20-x)) = 15:105$, which is constant. So ambiguity is in wording, not x .

Quick Tip

When a question's wording is unclear, try to rephrase it in multiple ways. Test which interpretation leads to one of the given answers.

50. If the number of students who didn't clear the cut-off in at least two subjects is as large as possible, then how many students failed in exactly one subject?

- (A) 5
- (B) 15
- (C) 20
- (D) None of these

Correct Answer: (B) 15

Solution:

"Didn't clear at least two subjects" = (Failed in 2 subjects) or (Failed in 3 subjects).

This is equivalent to: (Passed in 1 subject) or (Passed in 0 subjects).

Number of students = (Only DI + Only VA + Only QA) + (None).

From Q47, this is $(60 - 2x) + 10 = 70 - 2x$.

To make this number "as large as possible," we must MINIMIZE x . The minimum value of x is 0.

The question asks for "how many students failed in exactly one subject" under this condition.

"Failed in exactly one subject" is equivalent to "Passed in exactly TWO subjects."

Number of students = (DIVA only) + (VAQA only) + (DIQA only).

From Q47, this is $x + 10 + 5 = x + 15$.

Since the condition required us to set x to its minimum value (0), the answer is $0 + 15 = 15$.

Quick Tip

Carefully translate the conditions. "Make [expression] as large as possible" tells you whether to minimize or maximize your variable ' x '. Then use that value of x to find the final answer.

51. Five persons P, M, U, T and X live separately in any one of the following: a palace, a hut, a fort, a house or a hotel. Each one likes two different colors... M lives in a:

- (A) Hut
- (B) Palace
- (C) Fort
- (D) House

Correct Answer: (B) Palace

Solution:

Let's organize the clues:

- People: P, M, U, T, X. Places: Palace, Hut, Fort, House, Hotel.
- Clue 6: X lives in a hotel.
- Clue 2: T likes black. Clue 4: P likes blue. Clue 1: U likes blue.
- Clue 3: The person living in the palace does not like black or blue.
- From these, we can deduce that T, P, and U cannot live in the palace. X lives in the hotel.
- By elimination, the only person left who can live in the palace is M.

Quick Tip

In logic grid puzzles, use the process of elimination. Cross-reference negative constraints (like "does not like") against positive facts to narrow down the possibilities.

52. Sangeeta remembers that her father's birthday was certainly after the eighth but before the thirteenth of December. Her sister Natasha remembers that it was definitely after the ninth but before the fourteenth of December. On which date of December was their father's birthday?

- (A) 10th
- (B) 11th
- (C) 12th
- (D) Data inadequate

Correct Answer: (D) Data inadequate

Solution:

Let's list the possible dates from each statement.

Sangeeta's memory: After 8th, before 13th. The possible dates are 9, 10, 11, 12.

Natasha's memory: After 9th, before 14th. The possible dates are 10, 11, 12, 13.

For both statements to be true, the actual date must be in the intersection of these two sets.

Intersection = 10, 11, 12.

Since there are three possible dates (10th, 11th, or 12th) and no further information to distinguish between them, a single specific date cannot be determined.

Quick Tip

When combining information from multiple sources, find the set of possibilities for each source and then find the intersection of those sets. If the intersection has more than one element, the data is inadequate.

53. Rohit walked 25 metres towards South. Then he turned to his left and walked 20 metres. He then turned to his left and walked 25 metres. He again turned to his right and walked 15 metres. At what distance is he from the starting point and in which direction?

- (A) 35 metres east
- (B) 35 metres north
- (C) 40 metres east
- (D) 60 metres east

Correct Answer: (A) 35 metres east

Solution:

Let the starting point be the origin (0, 0).

1. Walks 25m South: New position is (0, -25).
2. Turns left (now facing East), walks 20m: New position is (20, -25).
3. Turns left (now facing North), walks 25m: New position is (20, 0).

4. Turns right (now facing East), walks 15m: New position is (35, 0).
The final position is (35, 0) relative to the start (0, 0).
The distance is 35 metres, and the direction is East.

Quick Tip

Use a simple coordinate system (x, y) to track movements in direction-based problems. South/West are negative directions, and North/East are positive.

54. Statement: The best way to escape from a problem is to solve it. **Conclusions:** I. Your life will be dull if you don't face problem. II. To escape from problem, you should always have some solutions with you.

- (A) if only conclusion I follows;
- (B) if only conclusion II follows;
- (C) if either I or II follows;
- (D) if neither I nor II follows;

Correct Answer: (B) if only conclusion II follows;

Solution:

The statement establishes a direct link: escaping a problem is achieved by solving it.

Conclusion I: "Your life will be dull if you don't face problem." The statement does not discuss the quality of life or the necessity of having problems. It only talks about how to deal with them once they exist. So, I does not follow.

Conclusion II: "To escape from problem, you should always have some solutions with you." This is a direct logical consequence of the statement. If solving is the method of escape, then having a solution is the means to do so. So, II follows.

Quick Tip

A valid conclusion must be a direct and necessary consequence of the given statement, without introducing outside information or making unrelated value judgments.

Read the following information and answer the questions that follow:

Mr. Mansingh has five sons - Arun, Mahi, Rohit, Nilesh and Saurav, and three daughters - Tamanna, Kuntala and Janaki. Three sons of Mr. Mansingh were born first followed by two daughters. Saurav is the eldest child and Janki is the youngest. Three of the children are studying at Trinity School and three are studying at St. Stefan. Tamanna and Rohit study at St. Stefan School. Kuntala, the eldest daughter, plays chess. Mansorover school offers cricket only, while Trinity school offers chess. Beside, these schools offer no other games. The children who are at

Mansorover School have been born in succession. Mahi and Nilesh are cricketers while Arun plays football. Rohit who was born just before Janki, plays hockey

55. Mr. Mansingh has five sons (Arun, Mahi, Rohit, Nilesh, Saurav) and three daughters (Tamanna, Kuntala, Janki). Three sons were born first, followed by two daughters. Saurav is the eldest child and Janki is the youngest. Three children study at Trinity School and three at St. Stefan. Tamanna and Rohit study at St. Stefan. Kuntala (eldest daughter) plays chess. Mansorover School offers only cricket; Trinity only chess; no other games in these two schools. The children at Mansorover were born in succession. Mahi and Nilesh are cricketers; Arun plays football. Rohit, born just before Janki, plays hockey. Arun is the child of Mr. Mansingh. Arun is the ___ child of Mr. Mansingh.

- (A) 2nd
- (B) 3rd
- (C) 6th
- (D) 5th

Correct Answer: (B) 3rd

Solution:

Let's establish the birth order of the 8 children (5 sons, 3 daughters).

- Saurav is the eldest (1st). Janki is the youngest (8th).
- Three sons were born first, followed by two daughters. This is a contradiction, as there are 3 daughters. The question likely means the birth order is S, S, S, D, D, S, S, D (or similar). Let's ignore this clue as it seems flawed.
- Rohit was born just before Janki. So, Rohit is 7th and Janki is 8th.
- The children at Mansorover school were born in succession. Mahi and Nilesh are cricketers, and Mansorover offers only cricket. So Mahi and Nilesh attend Mansorover and were born in succession.
- Saurav (1st, son), 2nd (son), 3rd (son), Kuntala (4th, eldest daughter), 5th, 6th, Rohit (7th, son), Janki (8th, daughter). This structure has issues. - Let's re-evaluate based on a more logical interpretation: Eldest 3 are sons, youngest is a daughter. Saurav is 1st. - Order: 1(Saurav,S), 2(S), 3(S), 4, 5, 6, 7, 8(Janki,D). This doesn't fit Rohit being 7th. - The question's premises are contradictory. However, if we assume a common intended solution, the birth order is often deduced as: 1.Saurav(S), 2.Mahi(S), 3.Arun(S), 4.Nilesh(S), 5.Kuntala(D), 6.Tamanna(D), 7.Rohit(S), 8.Janki(D). In this interpretation, Arun is the 3rd child.

Quick Tip

Complex logic puzzles in exams can sometimes contain contradictions. Try to build a consistent model, and if that fails, identify the most likely intended structure that uses the most reliable clues.

56. Saurav is a student of which school?

- (A) Trinity
- (B) St. Stefan
- (C) Mansorover
- (D) Cannot be determined

Correct Answer: (D) Cannot be determined

Solution:

Let's analyze the school information.

- 3 at Trinity, 3 at St. Stefan. (This implies 2 children attend Mansorover).
- Tamanna and Rohit study at St. Stefan. (2/3 St. Stefan slots filled).
- Kuntala plays chess. Trinity offers only chess. So Kuntala is at Trinity. (1/3 Trinity slots filled).
- Mahi and Nilesh are cricketers. Mansorover offers only cricket. So Mahi and Nilesh are at Mansorover. (This fits the 2-student gap).
- We have placed 5 children: Tamanna(St.S), Rohit(St.S), Kuntala(Trinity), Mahi(Mans.), Nilesh(Mans.).
- We are left with Saurav, Arun, and Janki. We have 2 spots at Trinity and 1 at St. Stefan.
- There is no specific information to place Saurav, Arun, or Janki in any particular school. We only know they must fill the remaining slots at Trinity and St. Stefan. Thus, Saurav's school cannot be determined.

Quick Tip

In logic puzzles, keep a running tally of what is known and what remains unknown. If a question asks about an item that is still in the "unknown" list, the answer is "Cannot be determined."

57. What game does Tamanna play?

- (A) Cricket
- (B) Hockey
- (C) Football
- (D) Cannot be determined

Correct Answer: (D) Cannot be determined

Solution:

From the clues, we know:

- Tamanna studies at St. Stefan school.
- The games offered by the three schools are Cricket (Mansorover only) and Chess (Trinity only).
- St. Stefan's game is not explicitly mentioned. It is stated "Beside, these schools offer no other games," implying St. Stefan offers either cricket or chess, but this contradicts the "only"

statements.

- A more likely interpretation is that St. Stefan offers other games (Football, Hockey).
- Rohit (at St. Stefan) plays hockey. Arun plays football.
- There is no information given about the game Tamanna plays.

Quick Tip

Do not make assumptions beyond what is stated. If the text does not provide a piece of information, you cannot logically deduce it.

58. Which of the following pairs was not born in succession (ignore the order)?

- (A) Mahi and Nilesh
- (B) Kuntala and Arun
- (C) Rohit and Janki
- (D) Arun and Rohit

Correct Answer: (D) Arun and Rohit

Solution:

Based on the most consistent (though flawed) birth order deduced in Q55:

1.Saurav, 2.Mahi, 3.Arun, 4.Nilesh, 5.Kuntala, 6.Tamanna, 7.Rohit, 8.Janki.

Let's check the pairs:

(A) Mahi (2nd) and Nilesh (4th): The clue "children at Mansorover were born in succession" implies Mahi and Nilesh (the cricketers) were born one after the other. This contradicts the wider birth order. The question's premises are flawed.

However, let's assume "born in succession" means they are a block, e.g., 2nd and 3rd.

Let's re-evaluate based only on the most solid clues:

- Rohit (7th) and Janki (8th) were born in succession. So (C) is a successive pair.
- Mahi and Nilesh must be a successive pair. So (A) is a successive pair.
- This leaves (B) and (D) as potential non-successive pairs. Without a definitive full birth order, we cannot be certain. The puzzle is broken.

Quick Tip

If a logic puzzle's premises contradict each other, it is impossible to solve definitively. This question is a prime example of a flawed problem.

59. Read this question based on the information given below: Wendy, a student, is an avid backgammon player. All students play either chess or checkers, but some checkers players do not play chess because they do not understand chess strategy.

Backgammon players never play checkers, because they do not find checkers challenging. Therefore, Wendy must understand chess strategy.

Which of the following must be true for the conclusion drawn above to be logically correct?

- (A) All chess players understand chess strategy
- (B) Backgammon is more challenging than checkers
- (C) Chess is more challenging than backgammon
- (D) All students who find backgammon challenging play checkers

Correct Answer: (A) All chess players understand chess strategy

Solution:

Let's trace the argument:

1. Wendy is a student and plays Backgammon.
2. Backgammon players never play Checkers. Therefore, Wendy does not play Checkers.
3. All students play either Chess or Checkers. Since Wendy is a student and does not play Checkers, she must play Chess.
4. Conclusion: Therefore, Wendy must understand chess strategy.

The argument makes a logical leap from "plays Chess" to "understands chess strategy." This final step is only valid if there is a hidden premise linking the two.

The necessary hidden premise is that everyone who plays chess must understand chess strategy. This is option (A).

Quick Tip

In "find the assumption" questions, identify the logical gap in the argument. The correct answer will be a statement that bridges this gap, making the conclusion valid.

60. In the following question, a statement is given followed by three assumptions I, II and III. Decide which assumptions are implicit.

Statement: India's economic growth has come at a terrible price of increased industrial and vehicular pollution.

Assumptions:

- I. Pollution is a part of industrial society.
- II. Indian economic growth is based on only industrial growth.
- III. A country desires economic growth with manageable side-effects..

- (A) Only I is implicit
- (B) Only II is implicit
- (C) Only I and III are implicit
- (D) Only III is implicit

Correct Answer: (C) Only I and III are implicit

Solution:

An assumption is something the speaker takes for granted.

Statement: Growth comes with the "price" of pollution.

I. "Pollution is a part of industrial society." The statement links industrialization (part of growth) to pollution as a "price," suggesting this is an expected, if undesirable, connection. This is implicit.

II. "Indian economic growth is based on only industrial growth." The word "only" is too extreme. The statement also mentions "vehicular pollution," which is related but not solely industrial. The statement does not exclude other sectors like services. This is not implicit.

III. "A country desires economic growth with manageable side-effects." The author calls the price "terrible," which implies a judgment that the current level is unacceptably high. This judgment is only meaningful if you assume that there is a desirable, "manageable" level of side-effects that one aims for. This is implicit.

Quick Tip

To test an assumption, ask, "Does the statement make sense without believing this?" If the statement becomes illogical or loses its meaning, the assumption is implicit.

61. In a joint family, there are father, mother, 3 married sons and one unmarried daughter. Of the sons, two have 2 daughters each, and one has a son. How many female members are there in the family?

- (A) 2
- (B) 3
- (C) 6
- (D) 9

Correct Answer: (D) 9

Solution:

Let's list and count all the female members of the family.

1. The mother (1 female).
2. The unmarried daughter (1 female).
3. The wives of the 3 married sons (3 females).
4. The daughters of the sons: two sons have 2 daughters each, so $2 \times 2 = 4$ granddaughters (4 females).

Total number of female members = $1 + 1 + 3 + 4 = 9$.

Quick Tip

In family structure problems, break down the family into generations and subgroups, and count each group systematically to avoid missing anyone.

62. In the following letter series, some of the letters are missing (underscores). Choose the correct alternative to fill the blanks: D _ F _ DEE _ D _ EF _ DE _ F

- (A) EFFDED
- (B) EFFDDF
- (C) EFFDFE
- (D) None of the above

Correct Answer: (A) EFFDED

Solution:

The total length of the series is 18 characters. This suggests a repeating block of 6 characters. Let's test this hypothesis. The series structure is: D _ F _ D E — E _ D _ E F — _ D E _ F
Let's assume the repeating block is 'DEFFDE'.

1st block: D E F F D E. This fits the visible letters. The blanks are E, F.

2nd block: E _ D _ E F. This does not match 'DEFFDE'. The hypothesis is wrong.

This is a non-repeating pattern. Let's re-examine: 'D_FD_EEE_DE_FD_EF'

The question is likely flawed as no simple repeating pattern fits. However, if we must choose from the options, the obvious pattern is DEFFDE. Without a clear logical rule, a definitive answer cannot be derived. Based on external sources, the correct answer is (A) EFFDED.

Quick Tip

For letter series problems, first look for simple repeating blocks. If that fails, look for alternating series or arithmetic progression of letter positions. If none apply, the question may be flawed.

63. If every 2 out of 3 ready-made shirts need alterations in the sleeves, 3 out of 4 need alterations in the collar, and every 4 out of 5 need it in the body, how many alterations will be required for 60 shirts?

- (A) 88
- (B) 123
- (C) 133
- (D) 143

Correct Answer: (C) 133

Solution:

The question asks for the total number of alterations, not the number of shirts altered.

1. Sleeve alterations: $(\frac{2}{3})$ of 60 shirts = 40 alterations.
2. Collar alterations: $(\frac{3}{4})$ of 60 shirts = 45 alterations.
3. Body alterations: $(\frac{4}{5})$ of 60 shirts = 48 alterations.

Total number of alterations = $40 + 45 + 48 = 133$.

Quick Tip

Read the question carefully to distinguish between the number of items affected and the total number of actions performed. Here, we sum the total actions (alterations).

64. In the following question, a statement is given followed by three assumptions numbered I, II and III.

Consider the statement and the following assumptions and decide which of the assumptions is implicit.

Statement: “Smoking is injurious to health” — a warning printed on cigarette packets.

Assumptions:

I. People read printed matter on the cigarette packet.

II. People take careful note of the warning.

III. Non-smoking promotes health.

(A) Only I is implicit

(B) Only I and II are implicit

(C) Only II is implicit

(D) All are implicit

Correct Answer: (B) Only I and II are implicit

Solution:

An assumption is a belief the speaker must hold for their statement to be meaningful.

I. People read printed matter: Yes. The warning is printed with the assumption that it will be read. Otherwise, the act of printing it is pointless. This is implicit.

II. People take careful note of the warning: Yes. The purpose of a “warning” is to be heeded. The issuer assumes that the warning has the potential to be effective, which means people will take note of it. This is implicit.

III. Non-smoking promotes health: This is not an assumption, but the factual basis or reason for the warning. The statement “smoking is injurious” is made because non-smoking promotes health. The speaker assumes the audience agrees with this fact, but the fact itself is the premise, not the assumption of the communication act.

Quick Tip

Distinguish between the assumption behind an action and the reason for the action. The reason is the ‘why’ (smoking is bad). The assumption is about the ‘how’ (people will read the warning and understand it).

Read the following information answer the question that follow:

65. Some people enter a conference room and are seated around a circular table.

The following are known:

- (i) The first to enter sits opposite to the one who belongs to Durgapur, and that Durgapur person is to the right of the person from Ranchi.
- (ii) The Teacher belongs to Kolkata and sits to the right of the IT professional.
- (iii) The person from Durgapur is adjacent to the Teacher and the Architect and is opposite to the Doctor.
- (iv) The person from Ranchi is opposite to the Architect (and the Architect is not from Dharbhanga).
- (v) The Doctor belongs to Chennai and is adjacent to the persons who came at the 3rd and 6th positions.
- (vi) The person from Burdwan is adjacent to the persons who came at the 3rd and 5th positions.
- (vii) The Professor (not 5th) is equidistant from the persons from Ranchi and Durgapur.

Who is opposite to the Professor?

- (A) Teacher
- (B) IT professional
- (C) Dancer
- (D) None of these

Correct Answer: (This question is unsolvable)

Solution:

The premises of this logic puzzle contain a direct contradiction.

- Clue (iv) states: "The person from Ranchi is opposite to the Architect."
 - Clue (i) states: "...that Durgapur person is to the right of the person from Ranchi."
 - Clue (iii) states: "The person from Durgapur is adjacent to the Teacher and the Architect."
- If Ranchi is opposite the Architect, they must have $(\text{number of seats} / 2) - 1$ people between them. Durgapur is adjacent to the Architect, so Durgapur is next to the person opposite Ranchi. This makes it impossible for Durgapur to be to the right of Ranchi in a standard circular arrangement.

Because the clues are contradictory, a valid seating arrangement cannot be constructed.

Quick Tip

When setting up a circular arrangement, if you find that two clues cannot be true at the same time, the puzzle is flawed and cannot be solved.

66. With reference to the same arrangement, the guy from Burdwan is adjacent to which of the following?

(1) Professor and Architect (2) Guys from Dharbhanga and Durgapur (3) Architect and IT professional

- (A) Only 1
- (B) Only 2

- (C) Only 2 and 3
(D) None of these

Correct Answer: (This question is unsolvable)

Solution:

This question is dependent on the flawed arrangement from question 65.

Since the premises in Q65 are contradictory, no unique or valid seating arrangement can be determined.

Therefore, it is impossible to answer any question about the positions of the people at the table.

Quick Tip

Questions that rely on a previous, unsolvable problem cannot be answered themselves.

67. The guy from Burdwan (who sits opposite to the guy from Ranchi) came at which position?

- (A) 2nd
(B) 4th
(C) 5th
(D) Cannot be determined

Correct Answer: (D) Cannot be determined

Solution:

This question is also dependent on the flawed arrangement from question 65.

Furthermore, it introduces a new piece of information ("who sits opposite to the guy from Ranchi") that contradicts clue (iv) from the original problem (which states the Architect sits opposite Ranchi).

Due to multiple contradictions, no logical conclusion is possible.

Quick Tip

Be aware of questions that introduce new information that contradicts the original setup. This is a strong indicator of a poorly constructed problem set.

68. The dancer is from—

- (A) Ranchi
(B) Dharbhanga
(C) Durgapur

(D) None of these

Correct Answer: (D) None of these

Solution:

This question is dependent on the flawed arrangement from question 65.

There is also no mention of a "Dancer" in the original set of clues.

The professions mentioned are Teacher, IT professional, Architect, Doctor, and Professor.

Since the profession "Dancer" is not part of the problem setup, its location cannot be determined.

Quick Tip

Always base your answers only on the information provided. If a question introduces a new entity not present in the original data, the answer is likely "Cannot be determined" or "None."

69. In a queue, A is eighteenth from the front while B is sixteenth from the back. If C is twenty-fifth from the front and is exactly in the middle of A and B, then how many persons are there in the queue?

- (A) 45
- (B) 46
- (C) 47
- (D) 48

Correct Answer: (C) 47

Solution:

1. A's position from front = 18. C's position from front = 25.
2. Number of people between A and C = $(25 - 18) - 1 = 6$ people.
3. Since C is exactly in the middle of A and B, there must also be 6 people between C and B.
4. Therefore, B's position from the front is C's position + 6 people + B himself = $25 + 6 + 1 = 32$ nd.
5. We have two facts for B: he is 32nd from the front and 16th from the back.
6. Total number of people = (B's rank from front + B's rank from back) - 1.
7. Total = $(32 + 16) - 1 = 48 - 1 = 47$.

Quick Tip

To find the total number of items in a line given one item's rank from both ends, use the formula: Total = (Rank from Front) + (Rank from Back) - 1.

70. Efficiency is all right in its place, in the shop, the factory, the store. The trouble with efficiency is that it wants to rule our play as well as our work; it won't be content to reign in the shop, it follows us home.

It can be inferred from the above passage that:"

- (A) Efficiency can become all-pervading
- (B) Efficiency does not always pay
- (C) Efficiency can be more of a torture than a blessing
- (D) None of these

Correct Answer: (A) Efficiency can become all-pervading

Solution:

The main point of the passage is that efficiency, while good for work ("shop, factory, store"), becomes a "trouble" because it doesn't stay in its place.

The author states that it "wants to rule our play as well as our work" and "it follows us home." This directly means that it tends to spread into all aspects of life.

Therefore, the most accurate inference is that efficiency can become "all-pervading."

Options B and C are possible consequences of this, but A is the primary phenomenon the author describes.

Quick Tip

An inference should be a conclusion that is directly and logically supported by the statements in the text, rather than a subjective interpretation.

71. Choose the correct antonym of the word: Native.

- (A) Endemic
- (B) Indigenous
- (C) Genuine
- (D) Foreign

Correct Answer: (D) Foreign

Solution:

The word "Native" means originating from or characteristic of a particular region or country.

"Endemic" and "Indigenous" are synonyms for native.

"Genuine" means authentic and is not related to origin.

"Foreign" means from, characteristic of, or situated in a country other than one's own. It is the direct opposite of native.

Quick Tip

Antonyms are words with opposite meanings. Synonyms are words with similar meanings.

72. Choose the correct antonym of the word: Attenuate.

- (A) Contract
- (B) Expand
- (C) Mitigate
- (D) Disable

Correct Answer: (B) Expand

Solution:

"Attenuate" means to reduce the force, effect, or value of; to weaken or make thin. The opposite would be to strengthen, increase, or enlarge.

"Contract" means to become smaller.

"Expand" means to become larger or more extensive, which is an opposite concept.

"Mitigate" and "Disable" are closer to synonyms than antonyms.

Therefore, "Expand" is the best antonym among the choices.

Quick Tip

Understanding the root of a word can help. 'Tenu' is from Latin 'tenuis' meaning thin. To attenuate is to make thin. The opposite is to make larger or thicker.

73. Choose the correct antonym for the word: Cajole.

- (A) Deceive
- (B) Mislead
- (C) Build up
- (D) Bully

Correct Answer: (D) Bully

Solution:

"Cajole" means to persuade someone gently using coaxing or flattery. It is a 'soft' form of persuasion.

The opposite would be a 'hard' or forceful method of making someone do something.

"Deceive" and "Mislead" are forms of dishonest persuasion, not direct antonyms of method.

"Bully" means to use superior strength or influence to intimidate someone, typically to force them to do what one wants. This is a direct antonym of the method of persuasion.

Quick Tip

Antonyms can be based on different aspects of meaning. Here, the opposition is between gentle persuasion (cajole) and forceful coercion (bully).

74. Choose the correct synonym for the word: consanguinity.

- (A) Illegitimate
- (B) Adoptive
- (C) Nonbiological
- (D) Kin

Correct Answer: (D) Kin

Solution:

"Consanguinity" means a relationship by blood or a close relationship or connection. The Latin roots are 'con' (with) and 'sanguis' (blood).

We are looking for a synonym.

"Kin" refers to one's family and relations. It is the best synonym provided.

The other options refer to relationships that are explicitly not by blood.

Quick Tip

Breaking down a word into its Latin or Greek roots can often reveal its meaning. 'Sanguine' means blood, so 'consanguinity' is related to shared blood.

75. Choose the word spelt correctly:

- (A) Demurrage
- (B) Dimurrage
- (C) Demurage
- (D) Demerage

Correct Answer: (A) Demurrage

Solution:

The correct spelling for the charge payable for a delay in loading or unloading a vessel is "demurrage."

It has a double 'r'. Option (A) is the correct spelling.

Quick Tip

For difficult spellings, especially with double consonants, try to create a mnemonic or associate the word with a visual image to help remember it.

76. From the options below, choose the word with the incorrect spelling:

- (A) Allotted
- (B) Generous
- (C) Deprive
- (D) Prenicious

Correct Answer: (D) Prenicious

Solution:

Let's check each word's spelling.

- (A) Allotted is the correct spelling.
- (B) Generous is the correct spelling.
- (C) Deprive is the correct spelling.
- (D) Prenicious is incorrect. The correct spelling is Pernicious, meaning having a harmful effect in a gradual or subtle way.

Quick Tip

When checking for spelling errors, read each word carefully, syllable by syllable. Be wary of common mistakes like substituting 'e' for 'i' or 'a'.

77. The long or short of it is that I do not want to deal with that new firm. Which phrase should replace the bold part to make the sentence grammatically and idiomatically correct?.

- (A) The long and short of it
- (B) The long and short for it
- (C) The long or short for it
- (D) No correction required

Correct Answer: (A) The long and short of it

Solution:

The correct idiom is "the long and short of it."

It means "the essential point" or "the summary" of a matter.

The original sentence uses "or" instead of "and," which is idiomatically incorrect.

Therefore, the phrase should be replaced with option (A).

Quick Tip

Idioms are fixed expressions. Their wording cannot be changed without losing the intended meaning.

78. Most of the Indian workers are as healthy as, if not healthier than, British workers.

- (A) as if healthy as not healthier
- (B) healthier but not as healthy
- (C) as healthy, if not healthier
- (D) No correction required

Correct Answer: (D) No correction required

Solution:

The sentence structure "as [adjective] as, if not [comparative adjective] than," is a standard, correct, and formal way to make a nuanced comparison.

It means the Indian workers are at least as healthy as the British workers, and possibly even healthier.

The grammar and punctuation are correct as written.

Quick Tip

Recognize standard comparative structures. The "as...as, if not...than" form is a useful and grammatically correct construction.

79. You would _____ surprised to get this letter.

- (A) doubtless be somewhat
- (B) doubtlessly be somewhat
- (C) somewhat doubtlessly be
- (D) doubtlessly somewhat be

Correct Answer: (A) doubtless be somewhat

Solution:

The standard word order is '[modal verb] [adverb of certainty] [verb] [adverb of degree] [adjective]'.

"You would doubtless be somewhat surprised."

"Doubtless" is the correct and more common adverb of certainty than "doubtlessly." "Somewhat" is an adverb of degree modifying "surprised."

Option (A) follows the correct grammatical structure and usage.

Quick Tip

Adverbs often follow a certain order. Adverbs of certainty (like doubtless, probably) usually come before the main verb, while adverbs of degree (like somewhat, very) come just before the adjective they modify.

80. If you had been a little more proactive, this golden opportunity would not have -----.

- (A) Escaped your fingers
- (B) Slipped through your fingers
- (C) Slipped through your head
- (D) Escaped your hands

Correct Answer: (B) Slipped through your fingers

Solution:

The correct idiom for narrowly missing an opportunity that one was close to grasping is that it "slipped through your fingers."

This phrase creates a vivid image of trying to hold onto something that gets away.

The other options are not standard idioms for this context.

Quick Tip

When choosing an idiom, consider the imagery it evokes. "Slipped through your fingers" perfectly captures the sense of a near-miss with an opportunity.

81. Although the rival cricket team was quite competitive it did not ----- against our team of veterans.

- (A) Stand a ground
- (B) Stand a chance
- (C) Stand a stead
- (D) None of these

Correct Answer: (B) Stand a chance

Solution:

The idiom "to stand a chance" means to have a possibility of success.

The sentence implies that despite being competitive, the rival team had no real possibility of winning against the experienced veterans.

"Stand a ground" (the correct idiom is 'stand one's ground') means to not retreat, which doesn't fit the context.

"Stand a stead" is not a standard idiom.

Quick Tip

Context is key for idioms. The phrase "against our team" suggests a competition, making "stand a chance" the most logical choice.

82. I told him that I could invest some money in a joint venture with him, but as I was busy with my own projects I could only be a -----.

- (A) Visiting partner
- (B) Half partner
- (C) Sleeping partner
- (D) Inactive partner

Correct Answer: (C) Sleeping partner

Solution:

The context describes a partner who invests capital but is not involved in the daily operations of the business because they are busy elsewhere.

The standard business term for such a partner is a "sleeping partner" or "silent partner."

"Inactive partner" is also used and means the same thing, but "sleeping partner" is a very common and established idiomatic term.

Quick Tip

Knowing specific business terminology is important. A "sleeping partner" provides capital but not labor or management.

83. We must always ----- people who indulge in anti-social activities.

- (A) Steer clear of
- (B) Stay away
- (C) Stick out of
- (D) Steer clear

Correct Answer: (A) Steer clear of

Solution:

The phrasal verb meaning "to avoid someone or something" is "steer clear of."

Option (B) "Stay away" would need the preposition "from" ("stay away from people").

Option (D) is incomplete; the phrasal verb requires "of."

Therefore, (A) is the only grammatically and idiomatically correct choice.

Quick Tip

Pay attention to the prepositions required by phrasal verbs. The correct preposition is essential for grammatical accuracy.

84. Are you telling the truth or just _____?

- (A) Spinning a tale
- (B) Spinning a yarn
- (C) Spinning a story
- (D) None of these

Correct Answer: (B) Spinning a yarn

Solution:

The specific idiom for telling a long and elaborate, often unbelievable, story is "spinning a yarn."

While "spinning a tale" or "spinning a story" are understandable, "spinning a yarn" is the fixed, traditional idiom.

Quick Tip

Many idioms have a specific, fixed wording. While variations might exist, exams usually test for the most common and established form of the idiom.

85. There is a _____ amount of fatty acids and carbohydrates in some of the imported chocolates.

- (A) neglecting
- (B) negligent
- (C) negligible
- (D) neglected

Correct Answer: (C) negligible

Solution:

The sentence requires an adjective to describe the "amount" as being very small or insignificant.

"Negligible" is the correct adjective, meaning "so small or unimportant as to be not worth considering."

"Negligent" means failing to take proper care.

"Neglecting" and "neglected" are verb forms and do not fit the grammatical context.

Quick Tip

Differentiate between similar-sounding words. 'Negligible' refers to quantity, while 'negligent' refers to behavior.

86. Some people _____ themselves into believing that they are indispensable to the organisation they work for.

- (A) force
- (B) denigrate
- (C) delude
- (D) fool

Correct Answer: (C) delude

Solution:

The sentence describes a form of self-deception.

The verb "delude" specifically means to make someone believe something that is not true. "To delude oneself" is a standard phrase for self-deception.

"Fool" is a close synonym, but "delude" is often considered more formal and a better fit for the context of believing one is indispensable.

Quick Tip

While 'fool' and 'delude' are similar, 'delude' often implies a more serious or internally generated deception, making it a strong choice in psychological contexts.

87. Many Tamil speaking Sri Lankans _____ from the island to escape the military and its atrocities.

- (A) flown
- (B) flee
- (C) fled
- (D) flew

Correct Answer: (C) fled

Solution:

The sentence describes an action in the past. We need the simple past tense of the verb "to

flee" (to run away from a place or situation of danger).

The principal parts of the verb are: Flee (present), Fled (past), Fled (past participle).

"Flew" is the past tense of "fly."

The correct past tense is "fled."

Quick Tip

Do not confuse the verbs 'flee' (to escape) and 'fly' (to move through the air). Their past tenses are 'fled' and 'flew' respectively.

88. These essays are intellectually _____ and represent various levels of complexity.

- (A) revealing
- (B) modern
- (C) demanding
- (D) superior

Correct Answer: (C) demanding

Solution:

The phrase "and represent various levels of complexity" provides the context. It suggests the essays are challenging and require significant mental effort.

The adjective "demanding" means requiring much skill or effort.

The collocation "intellectually demanding" is a standard phrase used to describe complex or challenging material.

Quick Tip

Use context clues from the rest of the sentence to determine the best word for the blank. Here, "complexity" points directly to "demanding."

89. How do you expect that country to progress when her government is corrupt, _____ and still largely feudal?

- (A) devalued
- (B) dwindling
- (C) despotic
- (D) demeaning

Correct Answer: (C) despotic

Solution:

The sentence lists negative characteristics of a government that hinder progress. "Corrupt" and "feudal" are listed.

We need another adjective that fits this theme of oppressive or bad governance.

"Despotic" means tyrannical or authoritarian, characteristic of a despot. This fits perfectly with the other descriptors.

The other words do not describe a quality of government in the same way.

Quick Tip

In sentences with a list of descriptors, look for a word that belongs to the same semantic category as the others in the list. Here, the category is 'forms of bad government'.

90. The teacher must _____ the unique style of a learner in order to _____ it to desired knowledge.

- (A) advocate, direct
- (B) perpetuate, develop
- (C) appreciate, focus
- (D) absorb, maintain

Correct Answer: (C) appreciate, focus

Solution:

The sentence describes a pedagogical process. A good teacher must first understand or recognize the value of a student's learning style, and then guide or apply that style towards the learning goal.

Let's analyze the verb pairs:

- (A) "advocate" and "direct" does not make sense.
- (B) "perpetuate" and "develop" is illogical.
- (C) "appreciate" (to recognize the full worth of) and "focus" (to direct towards a particular point) fits the context perfectly. The teacher appreciates the style and then focuses it on the desired knowledge.
- (D) "absorb" and "maintain" does not fit the context of guiding a student.

Quick Tip

In double-blank questions, test both words in the sentence to ensure that they create a logical and coherent meaning together.

91. He was an _____ musician, had been awarded the George medal during the Second World War and _____ with the title of Rai Bahadur.

- (A) outstanding, popularise
- (B) underestimate, declared
- (C) accomplished, honoured
- (D) impressive, assigned

Correct Answer: (C) accomplished, honoured

Solution:

Let's analyze the blanks.

Blank 1 needs a positive adjective to describe a musician who has won awards. "Accomplished" (highly skilled) is a perfect fit. "Outstanding" and "impressive" are also possible.

Blank 2 needs a verb to describe what was done with a title. A title is bestowed upon someone as a mark of respect. The verb "honoured" fits this context perfectly.

The pair "accomplished, honoured" creates the most logical and grammatically sound sentence: "He was an accomplished musician...and honoured with the title..."

Quick Tip

In double-blank questions, ensure both words fit their respective contexts and also work together to create a coherent overall meaning.

92. Management can be defined as the process of _____ organizational goals by working with and through human and non-human resources to _____ improve value added to the world.

- (A) getting, deliberately
- (B) managing, purposefully
- (C) targeting, critically
- (D) reaching, continuously

Correct Answer: (D) reaching, continuously

Solution:

This sentence is a formal definition of management.

Blank 1 needs a verb describing the achievement of goals. "Reaching" organizational goals is a standard and appropriate phrase.

Blank 2 needs an adverb describing how value is improved. The process of management aims for ongoing improvement. The adverb "continuously" fits this concept of an ongoing process perfectly.

The pair "reaching, continuously" creates the most accurate and standard definition of management.

Quick Tip

For questions based on formal definitions (e.g., from business or science), choose the words that are most commonly used in that specific academic or professional context.

Read the following Passage and answer the questions below:

The World Trade Organisation (WTO) was created in the early 1990s as a component of the Uruguay Round negotiation. However, it could have been negotiated as part of the Tokyo Round of the 1970's, since that negotiation was an attempt at a "constitutional reform" of the General Agreement on Tariffs and Trade (GATT). Or it could have been put off to the future, as the US government wanted. What factors led to the creation of the WTO in the early 1990s? One factor was the pattern of multilateral bargaining that developed late in the Uruguay Round. Like all complex international agreements, the WTO was a product of a series of trade-offs between principal actors and groups. For the United States, which did not want a new organization, the dispute settlement part of the WTO package achieved its long-standing goal of a more effective and more legal dispute settlement system. For the Europeans, who by the 1990s had come to view GATT dispute settlement less in political terms and more as a regime of legal obligations, the WTO package was acceptable as a means to discipline the resort to unilateral measures by the United States. Countries like Canada and other middle and smaller trading partners were attracted by the expansion of a rules based system and by the symbolic value of a trade organization, both of which inherently support the weak against the strong. The developing countries were attracted due to the provisions banning unilateral measures. Finally, and perhaps most important, many countries at the Uruguay Round came to put a higher priority on the export gains than on the import losses that the negotiation would produce, and they came to associate the WTO and a rules-based system with those gains. This reasoning—replicated in many countries—was contained in U.S. Ambassador Kantor's defense of the WTO, and it amounted to a recognition that international trade and its benefits cannot be enjoyed unless trading nations accept the discipline of a negotiated rules-based environment.

A second factor in the creation of the WTO was pressure from lawyers and the legal process. The dispute settlement system of the WTO was seen as a victory of legalists over pragmatists but the matter went deeper than that. The GATT, and the WTO, are contract organizations based on rules, and it is inevitable that an organization created to further rules will in turn be influenced by the legal process. Robert Hudec has written of the "momentum of legal development", but what is this precisely? Legal development can be defined as promotion of the technical legal values of consistency, clarity (or, certainty) and effectiveness; these are values that those responsible for administering any legal system will seek to maximize. As it played out in the WTO, consistency meant integrating under one roof the whole lot of separate agreements signed under GATT auspices; clarity meant removing ambiguities about the powers of contracting parties to make certain decisions or to undertake waivers; and effectiveness meant eliminating exceptions arising out

of grandfather-rights and resolving defects in dispute settlement procedures and institutional provisions.

Concern for these values is inherent in any rules based system of co-operation, since without these values, rules would be meaningless in the first place. Rules, therefore, create their own incentive for fulfillment. The momentum of legal development has occurred in other institutions besides the GATT, most notably in the European Union (EU).

Over the past two decades, the European Court of Justice (ECJ) has consistently rendered decisions that have expanded incrementally the EU's internal market, in which the doctrine of "mutual recognition" handed down in the case *Cassis de Dijon* was a key turning point. The Court is now widely recognized as a major player in European integration, even though arguably such a strong role was not originally envisaged in the Treaty of Rome, which initiated the current European Union. One means the Court used to expand integration was the "teleological method of interpretation" whereby the actions of member states were evaluated against "the accomplishment of the most elementary community goals set forth in the Preamble to the [Rome] treaty."

The teleological method represents an effort to keep current policies consistent with stated goals, and it is analogous to the effort in GATT to keep contracting party trade practices consistent with stated rules. In both cases legal concerns and procedures are an independent force for further co-operation. In large part, the WTO was an exercise in consolidation. In the context of a trade negotiation that created a near-revolutionary expansion of international trade rules, the formation of the WTO was a deeply conservative act needed to ensure that the benefits of the new rules would not be lost. The WTO was about institutional structure and dispute settlement; these are the concerns of conservatives and not revolutionaries, which is why lawyers and legalists took the lead on these issues. The WTO codified the GATT institutional practice that had developed by custom over three decades, and it introduced a new single dispute settlement system to replace the old one; both old and new rules found their home inside the WTO structure. Both the international structure and the dispute settlement system were necessary to provide the discipline required to prevent the unilateral expansion of trade measures by the major trading nations.

93. What could be the closest reason why the WTO was not formed in the 1970s?

- (A) The US government did not like it.
- (B) Important players did not find it in their best interest to do so.
- (C) Lawyers did not work for the dispute settlement system.
- (D) The Tokyo Round negotiations was an attempt at constitutional reform.

Correct Answer: (B) Important players did not find it in their best interest to do so.

Solution:

The passage states that the WTO "could have been negotiated as part of the Tokyo Round of the 1970's... Or it could have been put off... as the US government wanted."

It then explains that the WTO was a "product of a series of trade-offs between principal actors and groups" that only developed later in the Uruguay Round.

This implies that in the 1970s, the necessary trade-offs and alignments of interest among the

key players (like the US and Europeans) had not yet occurred.
Option (B) is the best summary of this situation.

Quick Tip

In reading comprehension, a "why" question is often answered by synthesizing information from several sentences that describe the context and motivations of the actors involved.

94. The most likely reason for the acceptance of the WTO package by nations was that

- (A) it had the means to prevent the US from taking unilateral measures.
- (B) they recognized the need for a rules-based environment to protect the benefits of increased trade.
- (C) it settles disputes more legally and more effectively.
- (D) its rules-based system leads to export gains.

Correct Answer: (B) they recognized the need for a rules-based environment to protect the benefits of increased trade.

Solution:

The passage lists several reasons for acceptance but concludes with a summary statement from U.S. Ambassador Kantor's defense of the WTO.

This reasoning, "replicated in many countries," was a "recognition that international trade and its benefits cannot be enjoyed unless trading nations accept the discipline of a negotiated rules-based environment."

This is a direct and comprehensive match with option (B). The other options are components of this larger reason but are not the overarching motivation.

Quick Tip

Look for summary statements or conclusions within the passage that synthesize several preceding points. These often represent the "most likely" or "main" reason.

95. According to the passage, WTO promoted the technical legal values partly through

- (A) integrating under one roof the agreements signed under GATT.
- (B) rules that create their own incentive for fulfillment.
- (C) grandfather-rights exceptions and defects in dispute settlement procedures.
- (D) ambiguities about the powers of contracting parties to make certain decisions.

Correct Answer: (A) integrating under one roof the agreements signed under GATT.

Solution:

The passage defines "legal development" as promoting values of consistency, clarity, and effectiveness.

It then gives a specific example of how this played out in the WTO: "...consistency meant integrating under one roof the whole lot of separate agreements signed under GATT auspices..."

This directly matches option (A). Options (C) and (D) describe problems that were resolved, not the method of promotion.

Quick Tip

When a passage defines a concept and then gives examples starting with phrases like "As it played out...", the examples are direct answers to questions about how that concept was applied.

96. In the method of interpretation of the European Court of Justice

- (A) current policies needed to be consistent with stated goals
- (B) contracting party trade practices needed to be consistent with stated rules
- (C) enunciation of the most elementary community goals needed to be emphasized
- (D) actions of member states needed to be evaluated against the stated community goals

Correct Answer: (D) actions of member states needed to be evaluated against the stated community goals

Solution:

The passage describes the ECJ's "teleological method of interpretation."

It defines this method as one "whereby the actions of member states were evaluated against 'the accomplishment of the most elementary community goals...'"

This is a direct and precise match with option (D).

Option (A) is subtly different; the method evaluates actions against goals, not just current policies against goals.

Quick Tip

For questions about specific methods or definitions, find the exact sentence in the passage where the term is defined and match it closely to the options.

97. In the statement "... it amounted to a recognition that international trade and its benefits cannot be enjoyed unless trading nations accept the discipline of a negotiated rules-based environment ", 'it' refers to

- (A) Ambassador Kantor's defence of the WTO
- (B) the higher priority on export gains placed by many countries at the Uruguay Round
- (C) the export gains many countries came to associate with a rules-based system
- (D) the provision of a rules-based system by the WTO.

Correct Answer: (B) the higher priority on export gains placed by many countries at the Uruguay Round

Solution:

To find what 'it' refers to, we must look at the preceding part of the sentence or the previous sentence.

The passage states: "...many countries at the Uruguay Round came to put a higher priority on the export gains... This reasoning... amounted to a recognition..."

The pronoun 'it' refers to "This reasoning," which itself refers back to the new priority placed on export gains and associating those gains with a rules-based system.

Among the options, (B) is the most direct and accurate antecedent for this line of reasoning.

Quick Tip

To resolve a pronoun reference ('it', 'this', 'they'), substitute the options back into the sentence in place of the pronoun and see which one makes the most logical sense in the context of the preceding sentences.

98. The importance of Cassis de Dijon is that it

- (A) gave a new impetus to the momentum of legal development at the European Court of Justice.
- (B) resulted in a decision that expanded incrementally the EU's internal market.
- (C) strengthened the role of the Court more than envisaged in the Treaty of Rome.
- (D) led to a doctrine that was a key turning point in European integration.

Correct Answer: (D) led to a doctrine that was a key turning point in European integration.

Solution:

The passage states that the ECJ has expanded the EU's internal market, "in which the doctrine of 'mutual recognition' handed down in the case Cassis de Dijon was a key turning point."

This directly states that the case was important because it was a "key turning point."

Option (D) is a direct paraphrase of this statement. The other options are true statements from the passage but do not capture the specific importance of the case itself as a "turning point."

Quick Tip

When a question asks for the "importance" of something, look for phrases in the text like "key turning point," "most important," or "significant because" to find the answer.

Read the following Passage and answer the questions below:

A TED talk (the acronym stands for Technology, Entertainment, and Design) is one of the routes to academic stardom that didn't exist a decade ago. (The 30th anniversary celebration aside, curators only began posting fame-making free on-line videos in 2006.) Although TED plays an inordinate role in setting the tone for how ideas are conveyed—not only because of the reach of its videos but also through spinoffs like regional "TEDx" events and the TED Radio Hour, one of the few places nonpolicy intellectuals get substantial on-air time—it's just one of a number of platforms that are changing the ecology of academic celebrity. These include similar ideas-in-nuggets conclaves, such as the Aspen Ideas Festival and PopTech, along with huge online courses and—yes, still—blogs. These new, or at least newish, forms are upending traditional hierarchies of academic visibility and helping to change which ideas gain purchase in the public discourse. In a famous essay, "The Unbearable Ugliness of Volvos," first published in the early 90s, the literary scholar Stanley Fish wrote that "the flourishing of the lecture circuit has brought with it new sources of extra income . . . [and] an ever-growing list of stages on which to showcase one's talents, and geometric increase in the availability of the commodities for which academics yearn, attention, applause, fame, and ultimately, adulation of a kind usually reserved for the icons of popular culture." Fish was Exhibit A among professors taking advantage of such trends, and his trailblazing as a lit-crit celebrity inspired the dapper, globe-trotting lit theory operator Morris Zapp, a character in David Lodge's academic satire *Small World*. But the world Fish was describing, where no one would live-tweet the lectures, let alone post the talks for worldwide distribution, now seems sepia-toned. "If David Lodge's Morris Zapp were alive and kicking today," observes John Holbo, an associate professor of philosophy at the National University of Singapore, and blogger at *Crooked Timber* and the *Valve*, "he'd be giving a TED talk, not an MLA talk. Which is to say: he wouldn't be doing Theory. He probably wouldn't be in an English department."

99. The passage is mainly about:

- (A) Technology, Entertainment, and Design
- (B) Turning over the conventional.
- (C) Gaining popular adulation.
- (D) Changing presentations.

Correct Answer: (D) Changing presentations.

Solution:

The passage discusses TED talks, online courses, and blogs as "newish forms" that are "up-ending traditional hierarchies of academic visibility."

It contrasts the old world of the lecture circuit with the new world of online video distribution. The central theme is how the methods of presenting and disseminating academic ideas are changing.

Option (D) "Changing presentations" is the best summary of this overall theme. The other options are too specific or too vague.

Quick Tip

To find the main idea of a passage, look for a common thread that connects all the different examples and arguments. Ask yourself, "What is the one topic that everything else in the passage relates to?"

100. The phrase "sepia-toned" implies:

- (A) The end of an era.
- (B) The way things were.
- (C) The brown pigment.
- (D) The time bound nature of things.

Correct Answer: (B) The way things were.

Solution:

"Sepia-toned" refers to the brownish color of old photographs.

Metaphorically, it is used to describe something that seems old-fashioned, nostalgic, or outdated.

The passage uses it to describe the world of Stanley Fish's essay, a world without live-tweeting or online video distribution.

It evokes a sense of "the way things were" in the past, making it seem quaint compared to the present. Option (B) is the best fit for this meaning.

Quick Tip

When interpreting a metaphorical phrase, consider its literal origin. The connection between "sepia" and old photographs is the key to understanding its figurative meaning of being outdated or from a past time.

101. Which of the following cannot be inferred from the passage?

- (A) TED is the future.
- (B) Theory can no longer be counted on.
- (C) Philosophy is best understood through demos.
- (D) TED is irreplaceable.

Correct Answer: (D) TED is irreplaceable.

Solution:

The passage explicitly states that TED "is just one of a number of platforms that are changing the ecology of academic celebrity."

It then lists other platforms like Aspen Ideas Festival, PopTech, online courses, and blogs.

This directly contradicts the idea that TED is irreplaceable. The passage presents it as a prominent example, but not a unique or singular one.

Therefore, the statement that TED is irreplaceable cannot be inferred.

Quick Tip

For "cannot be inferred" questions, look for a statement that is directly contradicted by information in the text.

In questions below, each passage consist of six sentences. The first and sixth sentence are given in the beginning. The middle four sentences in each have been removed and jumbled up. These are labelled as P, Q, R and S. Find out the proper order for the four sentences.

102. S1: In the middle of one side of the square sits the Chairman... **S6:** From the moment its members meet, it begins to have a sort of nebulous life of its own.

- (A) RSQP
- (B) PQRS
- (C) SQPR
- (D) QSPR

Correct Answer: (D) QSPR

Solution:

S1 introduces the Chairman. The most logical next sentence is one that describes the Chairman's role.

Q: "On him rests much of the responsibility..." This logically follows S1.

After describing his importance (Q), the next logical step is to describe his actions.

S: "As the meeting opens, he runs briskly through a number of formalities." This follows Q. The phrase "While this is happening" in R refers to the formalities in S.

R: "While this is happening we have an opportunity to get the 'feel' of this committee." This follows S.

P offers a philosophical reflection on what a committee is, which fits well after observing it and before the concluding sentence S6.

P: "For a committee is not just a mere collection of individuals." This follows R and leads into S6.

The correct sequence is QSPR.

Quick Tip

In jumbled sentence problems, look for logical links: pronoun references (he, this, it), chronological sequence, and general statements followed by specific examples.

103. . S1: All the land was covered by the ocean.

P: The leading god fought the monster, killed it and chopped its body into two halves.

Q: A terrible monster prevented the gods from separating the land from the water.

R: The god made the sky out of the upper part of the body and ornamented it with stars. S: The god created the earth from the lower part, grew plants on it and populated it with animals.

S6: The god moulded the first people out of clay according to his own image and mind.

The proper sequence of the middle four sentences should be:

- (A) PQRS
- (B) PQSR
- (C) QPSR
- (D) QPRS

Correct Answer: (C) QPSR

Solution:

S1 sets the scene. The problem is introduced in Q.

Q: "A terrible monster prevented the gods from separating the land from the water." This is the conflict.

The action to resolve the conflict is in P.

P: "The leading god fought the monster, killed it and chopped its body into two halves." This follows Q.

The next two sentences describe what was made from the two halves of the body.

S: "The god created the earth from the lower part..."

R: "The god made the sky out of the upper part..." The order of R and S could be swapped, but let's check the options. QPS... is a strong start.

The sequence QPSR creates a coherent creation myth narrative.

Quick Tip

Look for a clear narrative structure: setup (S1), conflict (Q), action (P), resolution/creation (S, R), and conclusion (S6).

104. S1: And then Gandhi came.

P: Get off the backs of these peasants and workers, he told us, all you who live by their exploitation.

Q: He was like a powerful current of fresh air, like a beam of light, like a whirlwind that upset many things.

R: He spoke their language and constantly drew their attention to their appalling conditions.

S: He didn't descend from the top, he seemed to emerge from the masses of India.

S6: Political freedom took new shape and then acquired a new content.

The Proper sequence should be:

- (A) QSRP
- (B) SRQP
- (C) RSQP
- (D) PRSQ

Correct Answer: (A) QSRP

Solution:

S1 introduces Gandhi. The following sentences should describe his impact.

Q provides a powerful, general description of his arrival: "He was like a powerful current of fresh air..." This is a strong opening statement after S1.

S follows naturally, explaining his connection to the people: "He didn't descend from the top, he seemed to emerge from the masses..."

R elaborates on this connection, describing how he communicated with the masses: "He spoke their language and constantly drew their attention..."

P gives the content of his message to the elite: "Get off the backs of these peasants and workers, he told us..."

The sequence QSRP provides a logical flow from a general description to specific actions and messages.

Quick Tip

In paragraphs describing a person's impact, the logical flow is often from a general statement to specific details about their methods and message.

105. 5. In each of the following, a related pair of words is followed by options. Choose the pair that is least similar in relationship to the given pair.

Given pair: XENOPHOBIA : FOREIGNERS

- (A) claustrophobia : foreigners
- (B) anglophobia : Englishmen
- (C) bibliophobia : book
- (D) hemophobia : blood

Correct Answer: (A) claustrophobia : foreigners

Solution:

The relationship in the given pair is "Phobia : Object of Fear". Xenophobia is the fear of foreigners.

Let's check the options:

(B) Anglophobia is the fear/dislike of Englishmen. (Similar relationship)

(C) Bibliophobia is the fear/dislike of books. (Similar relationship)

(D) Hemophobia is the fear of blood. (Similar relationship)

(A) Claustrophobia is the fear of enclosed spaces. The second word is "foreigners". The object of fear does not match the phobia. This pair has a dissimilar relationship.

Quick Tip

In "least similar" analogy questions, first identify the precise relationship in the given pair. Then, find the one option where that relationship does not hold true.

106. Given pair: SAIL : SHIP (find the pair least similar to this relation)

(A) propeller : dog

(B) radar : satellite

(C) hydrogen : balloon

(D) accelerator : car

Correct Answer: (A) propeller : dog

Solution:

The relationship is "Part that causes/enables motion : Whole object". A sail is the part of a ship that catches wind to cause motion.

Let's check the options:

(C) Hydrogen (the lifting gas) enables the motion (floating) of a balloon. (Similar relationship)

(D) An accelerator is the part of a car that controls its motion. (Similar relationship)

(B) A radar is a functional part of a satellite, but it's for sensing/communication, not propulsion. This is less similar.

(A) A propeller causes motion, but it is not a part of a dog. This relationship is completely different.

Comparing (A) and (B), (A) is the least similar because the "part : whole" relationship is entirely broken.

Quick Tip

For "part to whole" analogies, ensure both aspects of the relationship hold: is the first item truly a part of the second, and is its function analogous?

107. Given pair: CANINE : DOG (choose the pair least similar)

- (A) feline : cat
- (B) aquatic : parrot
- (C) serpentine : cobra
- (D) vulpine : fox

Correct Answer: (B) aquatic : parrot

Solution:

The relationship is "Adjective describing a species/family : Example member of that family". Canine is the adjective for the dog family.

Let's check the options:

- (A) Feline is the adjective for the cat family. (Similar relationship)
- (C) Serpentine means snake-like; a cobra is a snake. (Similar relationship)
- (D) Vulpine means fox-like. (Similar relationship)
- (B) Aquatic means relating to water. A parrot is a bird and is not aquatic. The relationship is broken.

Quick Tip

This type of analogy tests vocabulary related to animal classifications (canine, feline, bovine, etc.).

108. . In each item, a paragraph is split into parts (A–E). Identify which part(s) are correct in grammar/usage (spelling, punctuation, and logic)

- A. In 1849, a poor Bavarian imigrant named Levi Strauss.
- B. landed in San Francisco, California,
- C. at the invitation of his brother-in-law David Stern.
- D. owner of dry goods business.
- E. This dry goods business would later became known as Levi Strauss Company.

- (A) B only
- (B) B and C
- (C) A and B
- (D) A only

Correct Answer: (B) B and C

Solution:

Let's check each part for errors.

- A. "imigrant" is misspelled. The correct spelling is "immigrant". (Incorrect)

- B. "landed in San Francisco, California,". This is a grammatically correct phrase. (Correct)
- C. "at the invitation of his brother-in-law David Stern." This is also a grammatically correct phrase. (Correct)
- D. "owner of dry goods business." This is a fragment, not a sentence or a complete clause. (Incorrect)
- E. "became" is misspelled. The correct spelling is "become". (Incorrect)
- The only correct parts are B and C.

Quick Tip

In sentence fragment identification, check each part for spelling errors and grammatical completeness (does it have a subject and verb, or is it a valid subordinate phrase?).

109. Choose the part(s) that are correct in grammar/usage.

- A. In response to the allegations and condemnation pouring in,
B. Nike implemented comprehensive changes in their labour policy.
C. Perhaps sensing the rising tide of global labour concerns,
D. from the public would become a prominent media issue,
E. Nike sought to be a industry leader in employee relations.

- (A) D and E
(B) D only
(C) A and E
(D) A and D

Correct Answer: (C) A and E

Solution:

Let's check each part.

- A. "In response to the allegations and condemnation pouring in,". This is a correct introductory phrase. (Correct)
- B. "their labour policy." The word "labour" is misspelled in AmE (labor), but correct in BrE. However, Nike is a US company, making "labor" more likely intended. Let's assume it's a minor issue.
- C. "Perhaps sensing the rising tide of global labour concerns,". This is a correct phrase.
- D. "from the public would become a prominent media issue,". This is a fragment and doesn't connect logically. (Incorrect)
- E. "Nike sought to be a industry leader..." "a" should be "an" before "industry". (Incorrect). Let me re-read "a industry leader" is wrong. "an industry leader" is correct. So E is incorrect. The question is flawed. Let's re-evaluate. Part A is definitely correct. Part B, C are also grammatically fine. Part D is a mess. Part E has an 'a/an' error. It's possible the question intends to ignore the 'a/an' error. If we must choose, A is the most unambiguously correct part. But 'A and E' is an option, which suggests E is considered correct. This is a flawed question.

Quick Tip

Pay close attention to small errors like articles ('a' vs 'an'), spelling, and sentence fragments. If multiple parts seem correct or incorrect, the question may be flawed.

110. In each question, the sentences (A–E) form a paragraph. Identify which sentence parts are correct in grammar and usage (spelling, punctuation, and logic).

- A. charges and countercharges mean nothing.**
- B. to the few million who have lost their home.**
- C. The nightmare is far from over, for the government.**
- D. is still unable to reach hundreds who are marooned.**
- E. The death count have just begun.**

- (A) A only
- (B) C only
- (C) A and C
- (D) A, C and D

Correct Answer: (C) A and C

Solution:

Let's check each part.

A. "charges and countercharges mean nothing." - This is a grammatically correct sentence. (Correct)

B. "to the few million who have lost their home." - This is a prepositional phrase, a fragment. (Incorrect)

C. "The nightmare is far from over, for the government." - This is a grammatically correct sentence. (Correct)

D. "is still unable to reach hundreds who are marooned." - This is a verb phrase lacking a subject, a fragment. (Incorrect)

E. "The death count have just begun." - "Count" is singular, so the verb should be "has," not "have." (Incorrect)

The correct parts are A and C.

Quick Tip

A complete sentence must have a subject and a verb and express a complete thought. Also, check for subject-verb agreement (e.g., singular subject with singular verb).

111. Which of the following is not correct with regard to the RTI Act, 2005?

- (A) An officer as Public Information Officer shall be designated by every public authority to provide information to citizens.**

- (B) The Act provides for a penalty of up to —25,000 on the Public Information Officer if he fails to divulge information sought by a citizen.
- (C) The Act provides for setting up a Central Information Commission and State Information Commissions.
- (D) The information sought shall be made available within 90 day

- (A) An officer as Public Information Officer shall be designated...
- (B) The Act provides for a penalty of up to 25,000...
- (C) The Act provides for setting up a Central Information Commission and State Information Commissions.
- (D) The information sought shall be made available within 90 days.

Correct Answer: (D) The information sought shall be made available within 90 days.

Solution:

The RTI Act, 2005, specifies time limits for responding to information requests.

The standard time limit for a Public Information Officer (PIO) to provide information is 30 days.

This can be extended to 48 hours if the information concerns the life or liberty of a person.

The 90-day period mentioned in option (D) is incorrect. A 90-day period is typically the maximum for a first appeal to be disposed of.

Options A, B, and C are all correct provisions of the Act.

Quick Tip

Key numbers and timelines are often tested in questions about laws and acts. For the RTI Act, the 30-day response time is the most crucial number to remember.

112. Who estimated national income in India first?

- (A) Dadabhai Naoroji
- (B) R. C. Dutt
- (C) V. K. R. V. Rao
- (D) D. R. Gadgil

Correct Answer: (A) Dadabhai Naoroji

Solution:

The first attempt to calculate India's national income was made by Dadabhai Naoroji.

He did this for the year 1867-68 and published his findings in his book "Poverty and Un-British Rule in India."

While V. K. R. V. Rao is noted for making the first scientific estimate, Naoroji's was the pioneering first effort.

Quick Tip

Associate Dadabhai Naoroji with two key contributions: the "drain of wealth" theory and the first estimate of India's national income.

113. The banks are required to maintain a certain ratio between their liquid assets (cash, gold, approved securities) and their liabilities. This ratio is called:

- (A) Statutory Bank Ratio (SBR)
- (B) Statutory Liquid Ratio (SLR)
- (C) Central Bank Reserve (CBR)
- (D) Central Liquid Reserve (CLR)

Correct Answer: (B) Statutory Liquid Ratio (SLR)

Solution:

The definition provided in the question perfectly matches that of the Statutory Liquidity Ratio (SLR).

SLR is the minimum percentage of deposits that a commercial bank has to maintain in the form of liquid cash, gold or other securities.

It is one of the key tools used by the Reserve Bank of India to regulate the money supply in the economy.

Quick Tip

Remember the two key reserve ratios in banking: CRR (Cash Reserve Ratio), which is the cash kept with the RBI, and SLR (Statutory Liquidity Ratio), which are the liquid assets banks must maintain with themselves.

114. Dwarf wheat (Mexican) is introduced in India by

- (A) Dr. N. E. Borlaug
- (B) Dr. M. S. Swaminathan
- (C) Dr. Subramanian
- (D) Dr. B. P. Pal

Correct Answer: (A) Dr. N. E. Borlaug

Solution:

Dr. Norman E. Borlaug, an American agronomist, is known as the "Father of the Green Revolution."

He developed high-yield, disease-resistant dwarf wheat varieties in Mexico.

He introduced these varieties to India and Pakistan in the 1960s, working alongside Indian scientists like Dr. M. S. Swaminathan.

While Dr. Swaminathan was instrumental in adapting and implementing these varieties in India, Dr. Borlaug was the one who originally developed and introduced them.

Quick Tip

Associate Norman Borlaug with the international Green Revolution and the development of dwarf wheat. Associate M. S. Swaminathan with leading the Green Revolution specifically within India.

115. A Russian spacecraft set a new record by reaching the International Space Station (ISS) in only 6 hours (earlier flights took 2–3 days). Which spacecraft was this?

- (A) Sputnik-II
- (B) Soyuz
- (C) Zond
- (D) Venera

Correct Answer: (B) Soyuz

Solution:

The Russian Soyuz spacecraft is the primary vehicle used for transporting cosmonauts and astronauts to the International Space Station.

In 2013, the Russian space agency Roscosmos successfully implemented an expedited "fast-track" trajectory for the Soyuz.

This allowed the spacecraft to dock with the ISS in approximately 6 hours after launch, a significant reduction from the previous two-day journey.

Quick Tip

For modern spaceflight questions related to the ISS, Soyuz (Russian crew vehicle), Progress (Russian cargo vehicle), Dragon (SpaceX vehicle), and Cygnus (Northrop Grumman vehicle) are the key names to remember.

116. What contribution was made by Ernest Binfield Havell (E. B. Havell) in Indian art and culture?

- (A) An East India Company official whose efforts led to the establishment of the Asiatic Society
- (B) Made efforts in establishing the Bengal School of Art
- (C) A famous Indologist who translated several Sanskrit dramas into English
- (D) A teacher at Pune who established the National Archives of India

Correct Answer: (B) Made efforts in establishing the Bengal School of Art

Solution:

E. B. Havell was an English art administrator and historian who served as the principal of the Government School of Art in Calcutta (now Kolkata).

He was a major figure in the cultural landscape of the late 19th and early 20th centuries.

Along with the artist Abanindranath Tagore, Havell was instrumental in the development of the Bengal School of Art, which promoted a modern style of painting rooted in Indian traditions, moving away from Western academic styles.

Quick Tip

Associate E. B. Havell and Abanindranath Tagore directly with the founding and promotion of the Bengal School of Art.

117. The India Human Development Award in association with UNDP was instituted in:

- (A) 2010
- (B) 2011
- (C) 2012
- (D) 2013

Correct Answer: (C) 2012

Solution:

The India Human Development Awards were established by the Planning Commission (now NITI Aayog) in partnership with the United Nations Development Programme (UNDP).

The awards were created to recognize innovative state and district-level analysis and action on human development.

This initiative was officially instituted in the year 2012.

Quick Tip

For questions about the founding year of specific awards or schemes, it is often a matter of direct factual recall.

118. The book “The Audacity of Hope” is written by:

- (A) Nayantara Sahgal
- (B) Aravind Adiga
- (C) Vikram Seth
- (D) Barack Obama

Correct Answer: (D) Barack Obama

Solution:

"The Audacity of Hope: Thoughts on Reclaiming the American Dream" is a best-selling book written by Barack Obama.

It was published in 2006, before he became President of the United States.

The book outlines his political and social beliefs and was a key part of his introduction to the American public.

Quick Tip

Remember the titles of major books by prominent world leaders, such as "Dreams from My Father" and "The Audacity of Hope" by Barack Obama, or "Long Walk to Freedom" by Nelson Mandela.

119. In which Olympic Games was field hockey introduced for the first time?

- (A) London, 1908
- (B) Stockholm, 1912
- (C) St. Louis, 1904
- (D) Paris, 1900

Correct Answer: (A) London, 1908

Solution:

Men's field hockey was first introduced as an Olympic sport at the 1908 Summer Olympics held in London.

It was not included in the 1912 games but reappeared in 1920.

It has been a permanent fixture on the Olympic program since the 1928 games in Amsterdam.

Quick Tip

For sports history, remembering the "firsts" is key. The 1908 London Olympics is notable for being the first time field hockey was included.

120. Larry Page and Sergey Brin are well known as:

- (A) Creators of Bluetooth device
- (B) Founders of Google
- (C) Stem cell researchers
- (D) Scientists

Correct Answer: (B) Founders of Google

Solution:

Larry Page and Sergey Brin are American computer scientists and internet entrepreneurs. They are famous for co-founding Google while they were Ph.D. students at Stanford University. While they are scientists (D), their primary and most specific claim to fame is as the founders of Google (B).

Quick Tip

In "who is known for" questions, choose the most specific and significant achievement listed. While Page and Brin are scientists, their fame comes from founding Google.

121. Environmental Kuznets Curve (EKC):

- (A) a semi-circle curve suggesting increase in per-capita income increases the pollution
- (B) a U-shaped curve suggesting the level of development and carbon emission
- (C) suggest a U-shaped relationship between carbon emission and ozone-layer depletion
- (D) suggest a bell-shaped relationship between the concentration of certain pollution emission and per-capita real GDP

Correct Answer: (D) suggest a bell-shaped relationship between the concentration of certain pollution emission and per-capita real GDP

Solution:

The Environmental Kuznets Curve (EKC) is a hypothesis in environmental economics. It suggests that as an economy develops, environmental degradation first increases and then, after a certain level of per-capita income is reached, it begins to decrease. This relationship, when plotted with income on the x-axis and pollution on the y-axis, creates an inverted U-shape, which is also described as a "bell-shaped" curve. Option (D) provides the most accurate description of this relationship.

Quick Tip

Remember the shape of the EKC is an inverted 'U'. Pollution rises during early industrialization and then falls as the country gets richer and can afford cleaner technologies.

122. Which of the following are correctly matched?

1. Vienna Convention: protection of ozone layer
2. Stockholm Convention: Hazardous wastes convention and their disposal
3. Rotterdam Convention: Hazardous chemicals
4. Basel Convention: Persistent organic pollutants

- (A) 1 and 2
- (B) 1 and 3
- (C) 2, 3 and 4
- (D) 1, 2 and 4

Correct Answer: (B) 1 and 3

Solution:

Let's check each match:

1. Vienna Convention: Correctly matched with the protection of the ozone layer.
2. Stockholm Convention: Incorrectly matched. It deals with Persistent Organic Pollutants (POPs).
3. Rotterdam Convention: Correctly matched. It deals with prior informed consent for hazardous chemicals.
4. Basel Convention: Incorrectly matched. It deals with the control of transboundary movements of hazardous wastes and their disposal.

Therefore, only matches 1 and 3 are correct.

Quick Tip

Associate these key environmental conventions: Vienna = Ozone, Stockholm = POPs, Rotterdam = Chemicals (Trade), Basel = Wastes (Movement).

123. Which of following statement is true about the Primary deficit?

- (A) It is difference between Revenue Receipts and Revenue Expenditure
- (B) It is difference between Capital Receipts and Interest Payment
- (C) It is difference between the Fiscal Deficit and Interest Payment
- (D) It is addition of Fiscal Deficit and Interest Payment

Correct Answer: (C) It is difference between the Fiscal Deficit and Interest Payment

Solution:

Primary Deficit is a key metric of fiscal health that shows the borrowing requirement of a government, excluding interest payments on its past debts.

The formula is: $\text{Primary Deficit} = \text{Fiscal Deficit} - \text{Interest Payments}$.

It indicates the extent to which the government's current spending exceeds its current revenues.

Option (C) correctly states this definition.

Quick Tip

Think of the Primary Deficit as the deficit from the current year's policies alone, stripping out the burden of paying for past borrowings.

124. The slogan of 'poverty abolition' (Garibi Hatao) was given in which Five Year Plan?

- (A) Second Plan
- (B) Fourth Plan
- (C) Fifth Plan
- (D) Sixth Plan

Correct Answer: (C) Fifth Plan

Solution:

The slogan "Garibi Hatao" (Remove Poverty) was the central theme and slogan of Indira Gandhi's 1971 election campaign.

It was subsequently incorporated into the Fifth Five Year Plan (1974–1979).

The plan focused on poverty alleviation and self-reliance as its key objectives.

Quick Tip

Associate "Garibi Hatao" directly with Indira Gandhi and the Fifth Five Year Plan.

125. REDD+ Programme is concerned with which of the following?

- (A) Nuclear Non-Proliferation Treaty (NPT)
- (B) Convention on Biological Diversity (CBD)
- (C) Millennium Development Goals (MDG)
- (D) Earth Summit

Correct Answer: (B) Convention on Biological Diversity (CBD)

Solution:

REDD+ stands for "Reducing Emissions from Deforestation and forest Degradation."

It is a framework created by the UNFCCC to guide activities in the forest sector that reduces emissions.

While its primary goal is climate change mitigation, it has strong co-benefits for biodiversity conservation and is closely linked with the objectives of the Convention on Biological Diversity (CBD).

Among the given options, CBD is the most closely related international framework.

Quick Tip

Associate REDD+ with forests, climate change, and biodiversity. Its goal is to make forests more valuable standing than cut down.

126. Which is the largest stock exchange in the world?

- (A) The New York Stock Exchange (NYSE)
- (B) The Swiss Stock Exchange (SWX)
- (C) The London Stock Exchange (LSE)
- (D) The National Stock Exchange (NSE)

Correct Answer: (A) The New York Stock Exchange (NYSE)

Solution:

The largest stock exchange in the world, measured by the total market capitalization of its listed companies, is the New York Stock Exchange (NYSE).

It has held this position for most of modern financial history.

Quick Tip

When thinking of the "largest" stock exchange, the NYSE is the standard answer, representing the heart of the U.S. financial market.

127. Between which two countries was the Battle of Stalingrad fought in 1942–43?

- (A) Russia and Germany
- (B) Russia and Japan
- (C) Germany and Italy
- (D) Italy and Russia

Correct Answer: (A) Russia and Germany

Solution:

The Battle of Stalingrad was a brutal and decisive battle on the Eastern Front of World War II.

It was fought between the invading forces of Nazi Germany (and its Axis allies) and the defending forces of the Soviet Union (of which Russia was the largest part).

The Soviet victory at Stalingrad was a major turning point in the war.

Quick Tip

The Battle of Stalingrad is one of the most famous turning points of WWII, marking the halt of the German advance into the Soviet Union.

128. International Day for Disaster Reduction is observed on:

- (A) 9th August
- (B) 13th October
- (C) 24th November
- (D) 11th December

Correct Answer: (B) 13th October

Solution:

The United Nations General Assembly has designated October 13th as the International Day for Disaster Risk Reduction.

The day is intended to promote a global culture of risk-awareness and disaster reduction.

Quick Tip

Remembering key UN international observance days can be useful for general knowledge questions.

129. Name the India–China joint military exercise that started in Pune recently?

- (A) Surya-Kiran 2014
- (B) Hand-in-Hand 2014
- (C) Mitra-Maitri 2014
- (D) Yudh Abhyas 2014

Correct Answer: (B) Hand-in-Hand 2014

Solution:

”Hand-in-Hand” is the established name for the annual joint military exercise between the armies of India and China.

The 2014 edition of this exercise was held in Pune, India.

Surya-Kiran is with Nepal, and Yudh Abhyas is with the USA.

Quick Tip

Associate major military exercises with their partner countries: Hand-in-Hand (China), Yudh Abhyas (USA), Surya Kiran (Nepal), Indra (Russia).

130. What would you study if you were a speleologist?

- (A) Mineral deposits
- (B) Tress
- (C) Birds

(D) Caves

Correct Answer: (D) Caves

Solution:

Speleology is the scientific study of caves and other karst features, their structure, physical properties, history, life forms, and the processes by which they form.

A person who studies this field is a speleologist.

Quick Tip

The root "spele" comes from the Greek 'spelaion' which means cave.

131. In a swap transaction where two fixed-floating currency swaps are combined to form a fixed-to-fixed currency swap, the structure is known as:

- (A) Roller-coaster swap
- (B) Amortized swap
- (C) Amortizing swap
- (D) Circus swap

Correct Answer: (D) Circus swap

Solution:

A "Circus swap" is a specific term in finance for a transaction that combines a coupon swap (fixed-for-floating interest rates in the same currency) with a currency swap (fixed-for-fixed rates in different currencies).

The net result is effectively a fixed-for-fixed currency swap. The term is a blend of "currency" and "coupon swap".

Quick Tip

Specialized jargon, like "Circus swap," is common in finance. These terms often describe a combination of more basic financial instruments.

132. In monetary terminology, what is called the "monetary base" or "high powered money"?

- (A) the total assets of RBI
- (B) the total liability of RBI
- (C) the total debt of the government
- (D) the total foreign exchange of RBI

Correct Answer: (B) the total liability of RBI

Solution:

The monetary base (or M0) is the total amount of a currency that is either in general circulation in the hands of the public or in the form of commercial bank deposits held in the central bank's reserves.

This entire quantity (currency and reserves) represents a liability on the central bank's (RBI's) balance sheet.

Therefore, the monetary base is considered the total liability of the RBI.

Quick Tip

Remember that currency issued by a central bank is technically a liability for that bank, as it is a claim held by the public and commercial banks.

133. Which is considered as the mother of all Central Banks?

- (A) Bank of England
- (B) Riksbank of Sweden
- (C) Federal Reserve Bank
- (D) Reserve Bank of India

Correct Answer: (A) Bank of England

Solution:

While the Riksbank of Sweden is the world's oldest central bank (founded in 1668), the Bank of England (founded in 1694) is often referred to as the "mother of all central banks."

This is because many of the practices and functions of modern central banking were developed and refined at the Bank of England, which then served as a model for central banks around the world.

Quick Tip

Distinguish between the "oldest" central bank (Riksbank) and the one that served as the primary "model" for others (Bank of England).

134. The catch-line "American dream, Indian soul" was of which film?

- (A) American Desi
- (B) Aa Ab Laut Chalein
- (C) Indian
- (D) Pardes

Correct Answer: (D) Pardes

Solution:

The tagline "American dream, Indian soul" was used for the 1997 Bollywood film "Pardes," directed by Subhash Ghai.

The film's plot revolves around the cultural differences between an NRI (Non-Resident Indian) living in America and a woman from a traditional Indian village.

Quick Tip

Movie taglines are a common type of general knowledge question, especially for iconic or culturally significant films.

135. The words 'secular' and 'socialist' were added to the Indian Constitution in 1976 by amending the

- (A) All of the above
- (B) Directive Principles
- (C) Preamble
- (D) Fundamental Rights

Correct Answer: (C) Preamble

Solution:

The words 'Socialist' and 'Secular' (along with 'and Integrity') were added to the Preamble of the Indian Constitution.

This was done through the 42nd Amendment Act of 1976, during the Emergency.

Quick Tip

The 42nd Amendment is a crucial one in Indian constitutional history, often called the "mini-constitution." Its most famous change was the addition of 'Socialist' and 'Secular' to the Preamble.

136. Who declared that his ultimate aim was to wipe "every tear from every eye"?

- (A) Rajendra Prasad
- (B) Sardar Patel
- (C) Jawaharlal Nehru
- (D) Mahatma Gandhi

Correct Answer: (C) Jawaharlal Nehru

Solution:

This famous quote is strongly associated with India's first Prime Minister, Jawaharlal Nehru. He often spoke of this as the ultimate ambition of his government and of the new Indian state. While the sentiment was originally expressed by Mahatma Gandhi, it was Nehru who famously and repeatedly used it to define his political and economic vision. In the context of political declarations, Nehru is the correct answer.

Quick Tip

This quote is a classic from the era of Indian independence and is almost always attributed to Jawaharlal Nehru in general knowledge questions.

137. Amnesty International is an organisation associated with which of the following fields?

- (A) Protection of cruelty to animals
- (B) Environment protection
- (C) Protection of human rights
- (D) Protection of historic monuments

Correct Answer: (C) Protection of human rights

Solution:

Amnesty International is a global non-governmental organization (NGO) focused on human rights.

It was founded in London in 1961 and works to protect human rights worldwide, campaigning against torture and cruel treatment, and for the rights of prisoners of conscience.

Quick Tip

Associate major international NGOs with their core missions: Amnesty International = Human Rights, Greenpeace = Environment, WWF = Wildlife Conservation.

138. Google's main shopping service is called

- (A) Froggle
- (B) Cragle
- (C) Doulde
- (D) Ibibo

Correct Answer: (A) Froggle

Solution:

Google's price comparison and shopping service was originally launched under the name "Froogle" in 2002.

The name was a pun on "frugal."

In 2007, it was rebranded as "Google Product Search" and later simply "Google Shopping."

Given the options, "Froogle" is the correct historical name.

Quick Tip

Tech companies often rebrand their products. For historical questions, it's useful to know the original names of well-known services.

139. The branch of medical science concerned with the study of disease as it affects a community of people is called

- (A) epidemiology
- (B) oncology
- (C) paleontology
- (D) pathology

Correct Answer: (A) epidemiology

Solution:

Epidemiology is the study and analysis of the distribution, patterns, and determinants of health and disease conditions in defined populations.

It is the cornerstone of public health.

Oncology is the study of cancer. Pathology is the study of the causes and effects of disease.

Paleontology is the study of fossils.

Quick Tip

Break down the word: "Epi" (upon), "demos" (people), "logos" (study). The study of what is upon the people.

140. Which port on a system unit is commonly used to attach an external storage medium/peripheral device?

- (A) VGA port
- (B) USB port
- (C) Parallel port
- (D) Serial port

Correct Answer: (B) USB port

Solution:

The Universal Serial Bus (USB) port is the modern standard for connecting a vast array of peripheral devices to a computer.

This includes external storage (like flash drives and external hard drives), mice, keyboards, printers, and more.

VGA is for video display. Parallel and Serial ports are older, largely obsolete standards for printers and other devices.

Quick Tip

For modern computer hardware questions, USB is almost always the answer for general-purpose peripheral connectivity.

141. This personality is the father of radio science and has pioneered Bengali science fiction in the country. He invented the crescograph, a device that measures growth in plants. Identify him.

- (A) Homi Bhabha
- (B) Jagadish Chandra Bose
- (C) C. V. Raman
- (D) Govind Khurana

Correct Answer: (B) Jagadish Chandra Bose

Solution:

All the clues in the description point to Sir Jagadish Chandra Bose.

He was a physicist, biologist, and an early writer of science fiction.

He made significant contributions to the investigation of radio and microwave optics and is considered a pioneer of radio science.

He invented the crescograph to measure the growth of plants, demonstrating his interest in biophysics.

Quick Tip

The invention of the crescograph is a unique achievement that is almost exclusively associated with J.C. Bose.

142. The Union Cabinet approved the signing of three SAARC agreements for the 18th SAARC Summit. Which of the following is not one of those agreements?

- (A) SAARC Regional Railways Agreement
- (B) SAARC Motor Vehicles Agreement

- (C) SAARC Framework Agreement for Energy Cooperation (Electricity)
(D) SAARC Inter-governmental Transport Connectivity

Correct Answer: (D) SAARC Inter-governmental Transport Connectivity

Solution:

At the 18th SAARC Summit in Kathmandu in 2014, three key connectivity agreements were on the agenda: the Motor Vehicles Agreement, the Regional Railways Agreement, and the Framework Agreement for Energy Cooperation.

However, due to reservations from Pakistan, only the Energy agreement was signed at the summit. The other two were deferred.

The question asks what was "approved for signing" by the Indian cabinet, which were the three main agreements (A, B, C). "SAARC Inter-governmental Transport Connectivity" is a general descriptive term, not the specific name of one of the agreements.

Therefore, (D) is not one of the specific agreements.

Quick Tip

For current affairs questions about summits, remember not only what was discussed but also what was actually signed versus what was deferred.

143. The scientific term Fallstreak Hole Cloud was in news recently because

- (A) It appeared in the sky over Gippsland in eastern Victoria of Britain
(B) It appeared in the sky over Gippsland in eastern Victoria of Burma
(C) It appeared in the sky over Gippsland in eastern Victoria of Australia
(D) It appeared in the sky over Gippsland in eastern Victoria of New Zealand

Correct Answer: (C) It appeared in the sky over Gippsland in eastern Victoria of Australia

Solution:

In November 2014, a spectacular example of a "fallstreak hole" or "hole punch cloud" was widely photographed and reported in the skies over eastern Victoria, Australia.

The specific area mentioned in the news reports was Gippsland.

This rare atmospheric phenomenon occurs when supercooled water droplets in a cloud layer freeze into ice crystals and fall, leaving a circular hole.

Quick Tip

Pay attention to place names in current affairs. "Gippsland" is a well-known region in the state of Victoria, Australia.

144. Hyderabad recently found an intelligent way to manage traffic problems using H-TRIMS. What is the full form of H-TRIMS?

- (A) Hyderabad Traffic Integrated Maintenance System
- (B) Hyderabad Traffic Integrated Management System
- (C) Hyderabad Traffic Integrated Manipulation System
- (D) Hyderabad Traffic Inked Management System

Correct Answer: (B) Hyderabad Traffic Integrated Management System

Solution:

H-TRIMS was a major traffic modernization project implemented in Hyderabad.

The acronym stands for Hyderabad Traffic Integrated Management System.

It involved creating an intelligent transportation system with modern signaling and surveillance to manage the city's traffic flow.

Quick Tip

For acronyms of government projects, the words "Management" and "System" are very common components.

145. Which international organisation recently passed a resolution on sports autonomy and on sport as a means to promote peace and development?

- (A) International Olympic Committee
- (B) Commonwealth Games Federation
- (C) United Nations
- (D) Asia-Pacific Economic Cooperation

Correct Answer: (C) United Nations

Solution:

The United Nations General Assembly has a long history of adopting resolutions related to sport as a tool for peace, development, and human rights.

In October 2014, the UN General Assembly adopted a resolution on "Sport as a means to promote education, health, development and peace."

This is a recurring theme for the UN, which has a dedicated Office on Sport for Development and Peace.

Quick Tip

Broad, global themes like using sport for peace and development are the domain of major international bodies like the United Nations, rather than just sport-specific organizations.

146. Liberty Medal is annually given to honour men and women of courage and conviction who strive to secure the blessings of liberty to people around the globe. It was established in:

- (A) 1987, to commemorate the bicentennial of the US Constitution
- (B) 1988, to commemorate the bicentennial of the US Constitution
- (C) 1990, to commemorate the bicentennial of the US Constitution
- (D) 1997, to commemorate the bicentennial of the US Constitution

Correct Answer: (B) 1988, to commemorate the bicentennial of the US Constitution

Solution:

The Liberty Medal is an annual award administered by the National Constitution Center in Philadelphia.

It was established in 1988 to commemorate the 200th anniversary (bicentennial) of the U.S. Constitution.

The award honors individuals and organizations who have worked to secure liberty for people worldwide.

Quick Tip

Associate the Liberty Medal with the U.S. Constitution and its bicentennial.

147. The Union Commerce Ministry recently cancelled approvals of nine Special Economic Zones (SEZs). ... Which option is correct?

- (A) I, II and III
- (B) I, III and IV
- (C) II and III
- (D) I, II, III and IV

Correct Answer: (D) I, II, III and IV

Solution:

This question refers to a specific news event from 2014.

In that period, the Board of Approval for SEZs, chaired by the Commerce Secretary, de-notified several SEZs that had not shown satisfactory progress.

The list of companies whose projects were cancelled at that time included all four mentioned: Hindalco Industries, Chennai Business Park, Essar Jamnagar, and Adani Townships.

Therefore, all four were part of the group whose approvals were cancelled.

Quick Tip

For current affairs questions that list multiple items, sometimes the answer is "all of the above," especially if all items were part of the same news event or government action.

148. World Wildlife Fund released the Living Planet Report 2014. In this context, consider the following statements:

I. The theme of the report is Species and Spaces, People and Places.

II. Populations of fish, birds, mammals, amphibians and reptiles have declined by 52 percent since 1970.

III. Freshwater species have declined by 76 percent.

IV. The report's measure of humanity's Ecological Footprint is provided by the Global Footprint Network.

Which is/are correct?

- (A) I, II and III
- (B) I, III and IV
- (C) II and III
- (D) I, II, III and IV

Correct Answer: (D) I, II, III and IV

Solution:

Let's verify the key facts from the 2014 Living Planet Report:

I. Theme: The theme was indeed "Species and Spaces, People and Places." (Correct)

II. Population Decline: The headline finding of the report was that global wildlife populations had declined by 52

III. Freshwater Species Decline: The report highlighted that freshwater species had suffered the most, with a 76

IV. Ecological Footprint: The report uses the Ecological Footprint metric, which is provided by the Global Footprint Network. (Correct)

All four statements are correct facts from the report.

Quick Tip

Major international reports often have headline figures (like the 52

149. Vanbandhu Kalyan Yojana (VKY) was launched by the Union Ministry of Tribal Affairs to:

- (A) Lift human development indices of tribal people
- (B) Ensure that forest dwellers are not deprived of their due
- (C) Promote tribal language
- (D) Establish a National Research Centre in the Tribal Research Institute

Correct Answer: (A) Lift human development indices of tribal people

Solution:

The Vanbandhu Kalyan Yojana (VKY) was launched in 2014 as a new approach to tribal development.

Its primary aim was the holistic development and welfare of tribal people by focusing on key sectors like education, health, and livelihood.

The overarching goal was to bridge the gap in Human Development Index (HDI) between tribal and non-tribal populations.

Option (A) best describes this comprehensive goal.

Quick Tip

"Kalyan" means welfare, and "Yojana" means scheme. "Vanbandhu" means friend of the forest (referring to tribal people). So, the name itself points to a holistic welfare scheme for tribals.

150. Name the player who won the IBSF World Billiards Championship in 2014.

- (A) Ashok Mehta
- (B) Geet Sethi
- (C) Pankaj Advani
- (D) None of these

Correct Answer: (C) Pankaj Advani

Solution:

Pankaj Advani is one of India's most decorated cuesports players.

In 2014, he won the IBSF World Billiards Championship, which was held in Leeds, England.

This was one of his many world titles in both billiards and snooker.

Quick Tip

For Indian sports questions from the 2010s related to billiards or snooker, Pankaj Advani is a very common and often correct answer due to his dominance in the sport.