SNAP 2014 Question Paper with Solutions

Time Allowed :2 Hours	**Maximum Marks :**150	**Total questions :**150

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.

Q1. 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:

Step 1: Identify vowels and consonants.

In the word EXTRA, the vowels are E, A; the consonants are X, T, R. We must keep the vowels *together*.

Step 2: Treat the two vowels as one block.

Keep $\{E, A\}$ as a single unit (call it [EA]). Then the effective units to arrange are

$$[\text{EA}],\ X,\ T,\ R \quad \Rightarrow \quad 4 \text{ distinct units.}$$

These 4 units can be arranged in $4! = 24$ ways.

Step 3: Arrange the vowels within their block.

Inside the block, the two vowels can be ordered as EA or AE $\Rightarrow 2!$ ways $= 2$.

Step 4: Multiply using the rule of product.

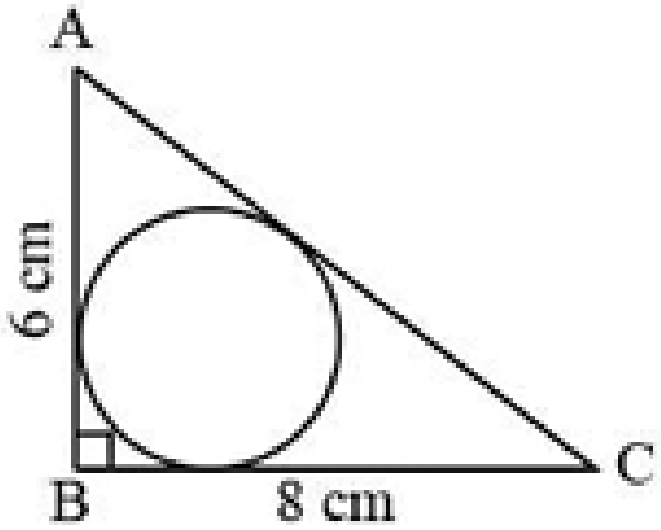
Total arrangements with vowels together

$$= (4!) \times (2!) = 24 \times 2 = \boxed{48}.$$

Quick Tip

For "vowels (or some letters) always together," bundle them as a single block, permute the blocks, then multiply by the internal permutations of the bundled letters.

Q2. 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:

Step 1: Find the hypotenuse.

Right triangle with legs $a = 6$ and $b = 8$:

$$c = \sqrt{a^2 + b^2} = \sqrt{6^2 + 8^2} = \sqrt{36 + 64} = 10 \text{ cm}.$$

Step 2: Use the inradius formula.

For any triangle, Area $= r \cdot s$, where r is the inradius and s is the semiperimeter.

Here,

$$s = \frac{a + b + c}{2} = \frac{6 + 8 + 10}{2} = 12, \qquad \text{Area} = \frac{1}{2}ab = \frac{1}{2} \cdot 6 \cdot 8 = 24.$$

Thus,

$$r = \frac{\text{Area}}{s} = \frac{24}{12} = \boxed{2 \text{ cm}}.$$

(Equivalent shortcut for right triangles): $r = \dfrac{a + b - c}{2} = \dfrac{6 + 8 - 10}{2} = 2$ cm.

Quick Tip

For a right triangle with legs a, b and hypotenuse c, the inradius is $r = \dfrac{a+b-c}{2}$. It comes directly from Area $= r \cdot s$ with $s = \dfrac{a+b+c}{2}$.

Q3. 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) $2\sqrt{(mn)}$

(C) $4\sqrt{(mn)}$

(D) $2\sqrt{(m/n)}$

Correct Answer: (C) $4\sqrt{mn}$

Solution:

Step 1: Express $m^2 - n^2$ in terms of $\tan\theta$ and $\sin\theta$.

$$m^2 - n^2 = (m+n)(m-n) = \big[(\tan\theta + \sin\theta) + (\tan\theta - \sin\theta)\big]\big[(\tan\theta + \sin\theta) - (\tan\theta - \sin\theta)\big]$$

$$\Rightarrow (2\tan\theta)(2\sin\theta) = 4\ \tan\theta\ \sin\theta.$$

Step 2: Relate $\tan\theta\sin\theta$ to mn.

$$mn = (\tan\theta + \sin\theta)(\tan\theta - \sin\theta) = \tan^2\theta - \sin^2\theta = \frac{\sin^2\theta}{\cos^2\theta} - \sin^2\theta$$

$$= \sin^2\theta\left(\frac{1}{\cos^2\theta} - 1\right) = \sin^2\theta\left(\frac{1-\cos^2\theta}{\cos^2\theta}\right) = \frac{\sin^4\theta}{\cos^2\theta} = \left(\frac{\sin^2\theta}{\cos\theta}\right)^2 = \big(\tan\theta\sin\theta\big)^2.$$

Thus $\tan\theta\sin\theta = \sqrt{mn}$ (taking the principal root; the options use magnitude).

Step 3: Substitute back.

$$m^2 - n^2 = 4\ \tan\theta\ \sin\theta = 4\sqrt{mn}.$$

$$\boxed{4\sqrt{mn}}$$

Quick Tip

When you see $(x+y)$ and $(x-y)$ pairs, try using $(m^2-n^2)=(m+n)(m-n)$. For trig expressions, convert everything to $\sin$ and $\cos$ and look for perfect squares like $(\tan\theta\sin\theta)^2$.

Q4. If A and B are two mutually exclusive and exhaustive events with $P(B)=3P(A)$, then what is the value of $P(\overline{B})$?

(A) $\frac{3}{4}$
(B) $\frac{1}{4}$
(C) $\frac{1}{3}$
(D) $\frac{2}{3}$

Correct Answer: (B) $\frac{1}{4}$

Solution:

Step 1: Use "mutually exclusive and exhaustive."

Exhaustive $\Rightarrow A\cup B=S$; mutually exclusive $\Rightarrow A\cap B=\varnothing$.

Hence

$$P(A)+P(B)=1.$$

Step 2: Apply the given ratio.

Given $P(B)=3P(A)$. Substitute:

$$P(A)+3P(A)=1\Rightarrow 4P(A)=1\Rightarrow P(A)=\frac{1}{4}.$$

Therefore $P(B)=3P(A)=\frac{3}{4}$.

Step 3: Find the complement.

$$P(\overline{B})=1-P(B)=1-\frac{3}{4}=\boxed{\frac{1}{4}}.$$

Quick Tip

For two events that are both mutually exclusive and exhaustive, their probabilities add to 1. If asked for a complement, just do $1 - P(\text{event})$.

Q5. A and B entered into a partnership investing ₹16,000 and ₹12,000 respectively. After 3 months, A withdrew ₹5,000 while B invested ₹5,000 more. After 3 more months, C joins the business with a capital of ₹21,000. 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:

Step 1: Compute each partner's *capital–month* units.

For A: first 3 months at $|16{,}000$, then 9 months at $|11{,}000$ (after withdrawing ₹5,000):

$$A: \ 16{,}000 \times 3 + 11{,}000 \times 9 = 48{,}000 + 99{,}000 = 147{,}000.$$

For B: first 3 months at $|12{,}000$, then 9 months at $|17{,}000$ (after adding ₹5,000):

$$B: \ 12{,}000 \times 3 + 17{,}000 \times 9 = 36{,}000 + 153{,}000 = 189{,}000.$$

For C: joins after 6 months, so invests $|21{,}000$ for the last 6 months:

$$C: \ 21{,}000 \times 6 = 126{,}000.$$

Step 2: Form the ratio and total units.

$A : B : C = 147{,}000 : 189{,}000 : 126{,}000,$ Total units $= 147{,}000+189{,}000+126{,}000 = 462{,}000.$

Step 3: Allocate the profit $|26{,}400$**.**

$$\text{Share of } B = \frac{189}{462} \times 26{,}400 = 10{,}800, \qquad \text{Share of } C = \frac{126}{462} \times 26{,}400 = 7{,}200.$$

Step 4: Find how much B exceeds C.

$$\text{Difference} = 10{,}800 - 7{,}200 = \boxed{3{,}600}.$$

Quick Tip

In partnership problems with entry/withdrawal changes, convert each person's investment into "capital–time" (e.g., rupee–months), sum to get the ratio, and then distribute profit proportionally.

Q6. 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:

Step 1: Define variables.

Let the usual speed be v km/h. Distance $D = 1500$ km. Usual time:

$$T = \frac{D}{v} = \frac{1500}{v} \text{ hours.}$$

Step 2: Relate new time and speed.

Plane leaves 0.5 h late but arrives on time $\Rightarrow$ flying time must be $T - 0.5$ h. New speed is $v + 250$, so

$$\frac{1500}{v + 250} = T - 0.5 = \frac{1500}{v} - 0.5.$$

Step 3: Solve for v.

Multiply through:

$$1500v = 1500(v+250) - 0.5\,v(v+250) \Rightarrow 0 = 375{,}000 - \frac{1}{2}v^2 - 125v.$$

$$\Rightarrow v^2+250v-750{,}000 = 0 \Rightarrow v = \frac{-250+\sqrt{250^2+4\cdot 750{,}000}}{2} = \frac{-250+\sqrt{3{,}062{,}500}}{2} = \frac{-250+1750}{2} = \boxed{7}$$

Quick Tip

"Late departure but on-time arrival" means the actual travel time decreased by the delay. Set up $\frac{D}{v+\Delta v} = \frac{D}{v}$ – delay and solve the resulting quadratic for v.

Q7. 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:

Step 1: Use divisibility by 6.

A number is divisible by $6 \Leftrightarrow$ it is divisible by 2 *and* by 3.

4456 is even, so divisibility by 2 is already satisfied.

Step 2: Make it divisible by 3.

Digit sum of 4456 is $4+4+5+6 = 19$. We need the smallest $x \geq 0$ such that $19+x$ is a multiple of 3.

$19 \equiv 1 \pmod 3 \Rightarrow x \equiv 2 \pmod 3$; the smallest such x is 2.

$4456+2 = 4458$ which is still even and $4+4+5+8 = 21$ is divisible by 3.

(Equivalent modular check): $4456 \equiv 4 \pmod 6 \Rightarrow$ add $x \equiv 2 \pmod 6$; smallest is $x = 2$.

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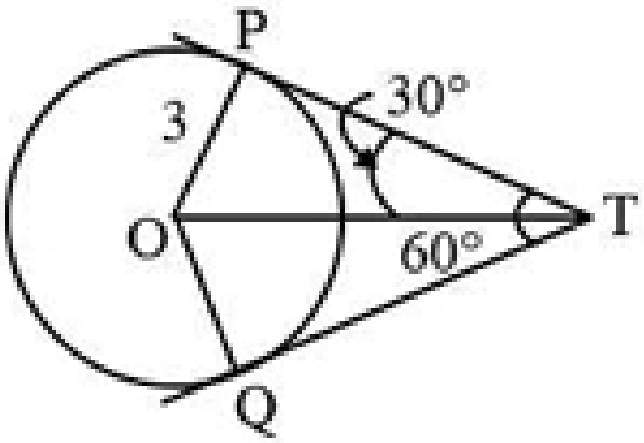
Quick Tip

For divisibility by 6, check both: evenness and sum of digits divisible by 3. Equivalently, add the "remainder complement" to reach the next multiple: if $N \equiv r \pmod 6$, add $6-r$.

Q8. 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) $\frac{3}{2}\sqrt{2}$ cm

(B) 6 cm

(C) 3 cm

(D) $3\sqrt{3}$ cm

Correct Answer: (D) $3\sqrt{3}$ cm

Solution:

Step 1: Set up the geometry.

Let T be the external point and TP, TQ the tangents with $\angle PTQ = 60^\circ$. O is the center and $OP \perp TP$, $OQ \perp TQ$. The line TO bisects the angle between the tangents, so

$$\angle PTO = \angle QTO = 30^\circ.$$

Step 2: Find TO (hypotenuse in right $\triangle PTO$).

In right triangle PTO, with $OP = 3$,

$$\sin 30^\circ = \frac{OP}{TO} = \frac{3}{TO} \;\Rightarrow\; TO = \frac{3}{\sin 30^\circ} = \frac{3}{1/2} = 6 \text{ cm}.$$

Step 3: Compute the tangent length TP.

Using Pythagoras in $\triangle PTO$ (right at P):

$$TP = \sqrt{TO^2 - OP^2} = \sqrt{6^2 - 3^2} = \sqrt{36 - 9} = \sqrt{27} = 3\sqrt{3} \text{ cm}.$$

$$\boxed{3\sqrt{3} \text{ cm}}$$

Quick Tip

For two tangents from a point, TO (line to the center) bisects the angle between them. Work in the right triangle formed by a tangent, the radius to the point of contact, and TO; use $\sin$ of the half-angle to get TO, then Pythagoras for the tangent length.

Q9. Find the value of $\log_{3^2} 5^4 \times \log_{5^2} 3^4$.

(A) 5

(B) 3

(C) 4

(D) 2

Correct Answer: (C) 4

Solution:

Step 1: Use power and base–power rules of logarithms.

For any positive $a, b \neq 1$ and integers m, n,

$$\log_{b^n}(a^m) = \frac{m}{n} \log_b a$$

because $\log_{b^n} x = \frac{1}{n} \log_b x$ and $\log_b(a^m) = m \log_b a$.

Step 2: Apply to both factors.

$$\log_{3^2} 5^4 = \frac{4}{2}\log_3 5, \qquad \log_{5^2} 3^4 = \frac{4}{2}\log_5 3.$$

Step 3: Multiply and simplify.

$$\left(\frac{4}{2}\log_3 5\right)\left(\frac{4}{2}\log_5 3\right) = \left(\frac{4}{2}\right)\left(\frac{4}{2}\right)\left(\log_3 5\,\log_5 3\right) = 2\cdot 2\cdot 1 = \boxed{4},$$

since $\log_3 5 \cdot \log_5 3 = 1$.

Quick Tip

When bases are powers, first convert $\log_{b^n}(a^m)$ to $\frac{m}{n}\log_b a$. Products like $\log_a b \cdot \log_b a$ collapse to 1.

Q10. 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:

Step 1: Convert each percentage to a decimal.

$25\% = 0.25, \quad 1\% = 0.01.$

Step 2: Multiply in order.

$$1000 \times 0.25 \times 0.01 \times 0.01 = 250 \times 0.01 \times 0.01 = 2.5 \times 0.01 = \boxed{0.025}.$$

Quick Tip

Chaining percentages? Convert every $\%$ to decimals and multiply straight through. Reordering the multiplications doesn't change the result.

Q11. C is the mid-point of $\overline{PQ}$. 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:

Step 1: Write the midpoint formula.

If C is the midpoint of $P(x_1, y_1)$ and $Q(x_2, y_2)$, then

$$C = \left(\frac{x_1 + x_2}{2},\ \frac{y_1 + y_2}{2}\right).$$

Step 2: Equate coordinates.

With $P = (4, x),\ Q = (-2, 4)$:

$$C = \left(\frac{4 + (-2)}{2},\ \frac{x + 4}{2}\right) = \left(1,\ \frac{x + 4}{2}\right).$$

Given $C = (y, -1)$. Hence

$$y = 1, \qquad \frac{x + 4}{2} = -1 \ \Rightarrow\ x + 4 = -2 \ \Rightarrow\ x = \boxed{-6}.$$

Therefore $(x, y) = \boxed{(-6,\ 1)}$.

Quick Tip

For midpoint problems, equate x- and y-coordinates separately. It's often fastest to compute the known coordinate directly and then back-solve the unknown.

Q12. 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) $\frac{7}{60}$
(B) $\frac{37}{60}$
(C) $\frac{1}{5}$
(D) $\frac{1}{8}$

Correct Answer: (B) $\frac{37}{60}$

Solution:

Step 1: Convert odds to probability.

If odds in favour are $a : b$, then

$$P(\text{win}) = \frac{a}{a+b}.$$

Hence

$$P(A) = \frac{1}{1+3} = \frac{1}{4}, \qquad P(B) = \frac{1}{1+4} = \frac{1}{5}, \qquad P(C) = \frac{1}{1+5} = \frac{1}{6}.$$

Step 2: Use mutual exclusivity (no dead heat).

Exactly one of A, B, C wins, so

$$P(\text{A or B or C wins}) = P(A) + P(B) + P(C) = \frac{1}{4} + \frac{1}{5} + \frac{1}{6} = \frac{15+12+10}{60} = \boxed{\frac{37}{60}}.$$

Quick Tip

"Odds in favour $a : b$" means a wins out of $(a+b)$ total equally likely outcomes, so $P = \frac{a}{a+b}$. If outcomes are mutually exclusive, sum their probabilities.

Q13. 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:

Step 1: Model payment by cow–months.

Cost share $\propto$ (number of cows)$\times$(months).

For A: $80 \times 7 = 560$ cow–months.

Let B use N cows for the last 3 months $\Rightarrow 3N$ cow–months.

Step 2: Use the payment ratio.

"Half as much again as A" means B pays 1.5 times $A \Rightarrow$ ratio $B : A = \dfrac{3}{2}$. Since payment $\propto$ cow–months,

$$\frac{3N}{560} = \frac{3}{2} \;\Rightarrow\; 3N = \frac{3}{2} \cdot 560 \Rightarrow N = \frac{560}{2} = \boxed{280}.$$

Quick Tip

In pasture/partnership problems, convert to "work units" (here, cow–months). The phrase "half as much again" means $150\% = \dfrac{3}{2}$ times.

Q14. 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) $2\frac{1}{4}\%$ 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:

Step 1: Recover the cost price (C.P.) from the first sale.

Selling price (S.P.$_1$) = ₹$6{,}30{,}000$ with 5% profit.

By definition,

$$\text{S.P.} = (1 + \text{profit}\%) \times \text{C.P.} \Rightarrow 6{,}30{,}000 = 1.05 \times \text{C.P.}$$

$$\Rightarrow \text{C.P.} = \frac{6{,}30{,}000}{1.05} = |6{,}00{,}000.$$

Step 2: Compare with the hypothetical sale at ₹5,00,000.

Hypothetical S.P.$_2$ = ₹5,00,000.

$$\text{Loss} = \text{C.P.} - \text{S.P.}_2 = 6{,}00{,}000 - 5{,}00{,}000 = |1{,}00{,}000.$$

Step 3: Compute the loss percentage on C.P.

$$\text{Loss}\% = \frac{\text{Loss}}{\text{C.P.}} \times 100 = \frac{1{,}00{,}000}{6{,}00{,}000} \times 100 = \frac{1}{6} \times 100 = 16.\overline{6}\% = 16\frac{2}{3}\%.$$

$$\boxed{16\frac{2}{3}\% \text{ loss}}$$

Quick Tip

Whenever a profit (or loss) percentage with a selling price is given, back out the cost price via C.P. $= \dfrac{\text{S.P.}}{1 \pm p}$. Then compare any other selling price to C.P. to find the new profit/loss *percentage*.

Q15. 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:

Let the ordered numbers be $a_1, a_2, \ldots, a_{11}$ with middle term a_6.

Step 1: Turn the averages into sums.

Total sum:

$$S_{1\text{–}11} = 11 \times 10.9 = 119.9.$$

Sum of the first six:

$$S_{1\text{–}6} = 6 \times 10.5 = 63.$$

Sum of the last six:

$$S_{6\text{–}11} = 6 \times 11.4 = 68.4.$$

Step 2: Use double counting of the middle term.

Notice $S_{1\text{–}6} + S_{6\text{–}11}$ counts all 11 numbers plus a_6 once more (since a_6 is included in both groups). Therefore,

$$S_{1\text{–}6} + S_{6\text{–}11} = S_{1\text{–}11} + a_6.$$

Hence

$$a_6 = \big(S_{1\text{–}6} + S_{6\text{–}11}\big) - S_{1\text{–}11} = (63 + 68.4) - 119.9 = 131.4 - 119.9 = \boxed{11.5}.$$

(Check via direct equations)

From the first-six average: $a_1 + \cdots + a_5 + a_6 = 63$.

From the last-six average: $a_6 + a_7 + \cdots + a_{11} = 68.4$.

Adding these two and subtracting total 119.9 again yields $a_6 = 11.5$.

Quick Tip

When averages of overlapping groups are given, convert to *sums*. Adding the groups and comparing with the whole reveals how many times the overlap was counted; subtract to isolate the common element (here, the middle number).

Q16. 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:

Step 1: Choose convenient total work (in "units").

Take the total work as $\mathrm{LCM}(25, 20) = 100$ units (so daily rates are integers).

Step 2: Compute individual rates.

A's one–day work $= \dfrac{100}{25} = 4$ units/day.

B's one–day work $= \dfrac{100}{20} = 5$ units/day.

Step 3: Work done together for 5 days.

Together rate $= 4 + 5 = 9$ units/day.

In 5 days, work completed $= 5 \times 9 = 45$ units.

Step 4: Find remaining work and time for B alone.

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

B alone does 5 units/day $\Rightarrow$ time $= \dfrac{55}{5} = \boxed{11 \text{ days}}$.

Quick Tip

For time–work problems, pick the LCM of the given times as the "total work." This converts rates to clean integers and makes partial-work computations straightforward.

Q17. 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:

Step 1: Find the original simple–interest rate.

Let the original rate be $r\%$ p.a. In 3 years, amount

$$A = P\left(1 + \tfrac{rt}{100}\right) = 800\left(1 + \tfrac{3r}{100}\right) = 956.$$

Divide by 800:

$$1+\tfrac{3r}{100}=\tfrac{956}{800}=1.195\Rightarrow\tfrac{3r}{100}=0.195\Rightarrow r=\frac{0.195\times100}{3}=6.5\%.$$

Step 2: Increase the rate by 3% and compute new amount.

New rate $=6.5\%+3\%=9.5\%$.

Amount after 3 years at simple interest:

$$A'=800\Big(1+\tfrac{3\times9.5}{100}\Big)=800\big(1+0.285\big)=800\times1.285=\boxed{\,|\,1028}.$$

Quick Tip

For simple interest, $A=P(1+\frac{rt}{100})$. When amounts over the same time are compared, first back-calculate r, then apply any change in rate to the same formula.

Q18. The jogging track in a sports complex 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:

Step 1: Convert speeds to the same units as the distance.

4.5 km/h $=\dfrac{4500\text{ m}}{60\text{ min}}=75$ m/min.

3.75 km/h $=\dfrac{3750\text{ m}}{60\text{ min}}=62.5$ m/min.

Step 2: Use relative speed (opposite directions add).

$$v_{\text{rel}}=75+62.5=137.5\text{ m/min}.$$

Step 3: Time to meet for the first time.

They meet when the *sum* of distances covered equals one full lap $= 726$ m. Hence

$$t = \frac{\text{distance}}{\text{relative speed}} = \frac{726}{137.5}\ \text{min} = 5.28\ \text{min}.$$

$$\boxed{5.28 \text{ minutes}}$$

Quick Tip

When two people move on a circular track in opposite directions, use *relative speed* (sum of speeds) and divide the circumference by this speed to get the first meeting time.

Q19. What number must be added to the expression $16a^2 - 12a$ to make it a perfect square?

(A) $\frac{9}{4}$
(B) $\frac{11}{2}$
(C) $\frac{13}{2}$
(D) 16

Correct Answer: (A) $\frac{9}{4}$

Solution:

Step 1: Complete the square.

Assume $16a^2 - 12a + k = (4a - b)^2$ for some b and find k.

Expand the RHS:

$$(4a - b)^2 = 16a^2 - 8ab + b^2.$$

Match coefficients with $16a^2 - 12a + k$:

$$-8ab = -12a \ \Rightarrow\ b = \frac{12}{8} = \frac{3}{2}.$$

Then

$$k = b^2 = \left(\frac{3}{2}\right)^2 = \frac{9}{4}.$$

Step 2: Verify the perfect square form.

$$16a^2 - 12a + \frac{9}{4} = (4a - \tfrac{3}{2})^2.$$

Hence the required number is

$$\boxed{\frac{9}{4}}.$$

Quick Tip

To "make a quadratic a perfect square," rewrite it as $(pa - q)^2$. Match the linear term to get q, then add q^2. Equivalently, factor out the leading square and complete the square on the inside.

Q20. 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:

Step 1: Define variables and totals.

Let A's salary be a and B's salary be b (in rupees). Given

$$a + b = 40{,}000. \tag{1}$$

Step 2: Express equal savings.

A spends $85\% \Rightarrow$ A saves 15% of $a \Rightarrow 0.15a$.

B spends $95\% \Rightarrow$ B saves 5% of $b \Rightarrow 0.05b$.

Savings are equal:

$$0.15a = 0.05b \;\Rightarrow\; 3a = b. \tag{2}$$

Step 3: Solve the system.

From (2), substitute $b = 3a$ into (1):

$$a + 3a = 40{,}000 \Rightarrow 4a = 40{,}000 \Rightarrow a = \boxed{10{,}000}.$$

Step 4: Quick reasonableness check.

Then $b = 30{,}000$. A saves $15\% \cdot 10{,}000 = 1{,}500$; B saves $5\% \cdot 30{,}000 = 1{,}500$ — equal as required.

$$\boxed{10{,}000}$$

Quick Tip

When two people's savings are equal, set "saved percents $\times$ salaries" equal. Percent equations often collapse to a clean ratio (here $b : a = 3 : 1$), which you can combine with the total.

Q21. 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:

Step 1: Set variables and use the division algorithm.

Let the smaller number be x and the larger number be y.

"Quotient 6, remainder 15" means

$$y = 6x + 15, \qquad 0 \le 15 < x. \tag{1}$$

Step 2: Use the given difference.

$$y - x = 1365. \tag{2}$$

Substitute y from (1) into (2):

$$(6x + 15) - x = 1365 \Rightarrow 5x + 15 = 1365 \Rightarrow 5x = 1350 \Rightarrow x = \boxed{270}.$$

Step 3: Validate conditions.

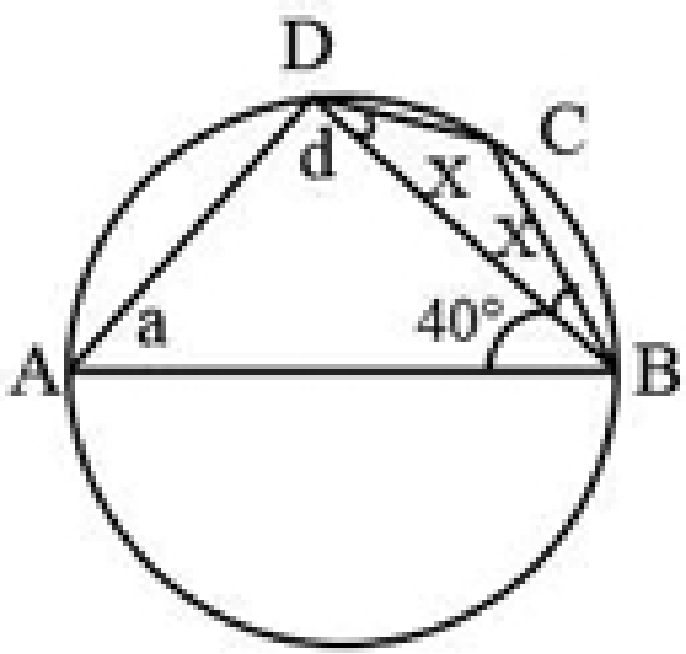
Then $y = 6(270) + 15 = 1620 + 15 = 1635$. Check: $y - x = 1635 - 270 = 1365$ (OK), and remainder $15 < x = 270$ (valid).

$$\boxed{270}$$

Quick Tip

Translate "when the larger is divided by the smaller, quotient q and remainder r" into $y = qx + r$ with $0 \leq r < x$. Combine with any other relation (like a sum or difference) to solve quickly.

Q22. In the adjoining figure, $ABCD$ is a cyclic quadrilateral. If AB is a diameter, $BC = CD$ and $\angle ABD = 40°$, find the measure of $\angle DBC$.



(A) 65°

(B) 25°

(C) 45°

(D) 60°

Correct Answer: (B) 25°

Solution:

Step 1: Use the diameter fact.

Since AB is a diameter, $\angle ADB = 90^\circ$ (angle in a semicircle).

In $\triangle ABD$: $\angle BAD + \angle ABD + \angle ADB = 180^\circ \Rightarrow \angle BAD + 40^\circ + 90^\circ = 180^\circ$.

Hence $\angle BAD = 50^\circ$.

Step 2: Use the cyclic quadrilateral property.

Opposite angles of a cyclic quadrilateral are supplementary: $\angle A + \angle C = 180^\circ$.

Here $\angle A = \angle DAB = 50^\circ \Rightarrow \angle C = 180^\circ - 50^\circ = 130^\circ$.

Thus $\angle BCD = \angle DCB = 130^\circ$ (angle at C of $\triangle BCD$).

Step 3: Use isosceles triangle BCD (since $BC = CD$).

Base angles at B and D are equal: $\angle CBD = \angle BDC = x$ (say).

In $\triangle BCD$: $x + x + 130^\circ = 180^\circ \Rightarrow 2x = 50^\circ \Rightarrow x = 25^\circ$.

Therefore $\angle DBC = \boxed{25^\circ}$.

Quick Tip

For cyclic figures with a diameter, first set the right angle at the endpoint on the circle. Then use $\angle A + \angle C = 180^\circ$ and any given side equalities to convert the problem to a triangle with easy angle sums.

Q23. 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) $\frac{1}{6}$

(B) $\frac{1}{5}$

(C) $\frac{1}{4}$

(D) $\frac{1}{7}$

Correct Answer: (D) $\dfrac{1}{7}$

Solution:

Step 1: Enumerate valid alternating patterns.

Without replacement, the only alternating length-4 sequences are

$$WBWB \quad \text{and} \quad BWBW.$$

Step 2: Compute $P(WBWB)$.

$$\frac{5}{8} \cdot \frac{3}{7} \cdot \frac{4}{6} \cdot \frac{2}{5} = \frac{24}{336} = \frac{1}{14}.$$

Step 3: Compute $P(BWBW)$.

$$\frac{3}{8} \cdot \frac{5}{7} \cdot \frac{2}{6} \cdot \frac{4}{5} = \frac{24}{336} = \frac{1}{14}.$$

Step 4: Add disjoint cases.

$$P(\text{alternating}) = \frac{1}{14} + \frac{1}{14} = \boxed{\frac{1}{7}}.$$

Quick Tip

For "alternating colours" with draws without replacement, list the few possible patterns (here two). Multiply conditional probabilities along each path, then add the disjoint path probabilities.

Q24. What is the value of x in the following expression?

$$x + \log_{10}(1 + 2^x) \;=\; x \log_{10} 5 \;+\; \log_{10} 6$$

(A) 1

(B) 0

(C) -1

(D) 3

Correct Answer: (A) 1

Solution:

Step 1: Collect the logarithms.

Write all logs with base 10 (denote $\log$ for $\log_{10}$):

$$\log(1 + 2^x) - \log 6 \;=\; x(\log 5 - 1).$$

Since $1 = \log 10$,

$$x(\log 5 - 1) = x\,\log\left(\frac{5}{10}\right) = x\,\log\left(\frac{1}{2}\right) = -x \log 2.$$

Hence

$$\log\left(\frac{1 + 2^x}{6}\right) = -x \log 2 = \log(2^{-x}).$$

Step 2: Equate antilogarithms and simplify.

$$\frac{1 + 2^x}{6} = 2^{-x} \;\Rightarrow\; 1 + 2^x = 6 \cdot 2^{-x}.$$

Multiply by 2^x:

$$2^x + 2^{2x} = 6.$$

Let $y = 2^x > 0$. Then $y^2 + y - 6 = 0 \Rightarrow (y+3)(y-2) = 0$.

So $y = 2$ (reject $y = -3$). Thus $2^x = 2 \Rightarrow x = \boxed{1}$.

Quick Tip

When an equation mixes plain terms and base-10 logs, move logs to one side and use $1 = \log 10$ to combine. Convert a linear combination into a single log and equate antilogs.

Q25. Which of the following functions is an odd function?

(A) $f(x) = 2^{-x^2}$

(B) $f(x) = 2^{x-x^4}$

(C) Both (a) and (b)

(D) Neither (a) nor (b)

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

Solution:

Recall: A function is *odd* if $f(-x) = -f(x)$ for all x.

Check (A): For $f(x) = 2^{-x^2}$,

$$f(-x) = 2^{-(-x)^2} = 2^{-x^2} = f(x),$$

so (A) is *even*, not odd.

Check (B): For $f(x) = 2^{x-x^4}$,

$$f(-x) = 2^{-x-x^4}.$$

Since $2^t > 0$ for all real t, $f(-x)$ is always positive, while $-f(x)$ is always negative (unless $f(x) = 0$, which never happens here). Hence $f(-x) \neq -f(x)$; (B) is not odd.

Therefore neither (A) nor (B) is an odd function:

$$\boxed{\text{Neither (a) nor (b)}}$$

Quick Tip

Any function of the form $2^{g(x)}$ (or $e^{g(x)}$) never takes negative values; it can't be odd unless it is identically 0. Quadratic exponents like $-x^2$ make the function even because they depend only on x^2.

Q26. 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:

Step 1: Compute the area to be painted.

For a cube of side $s = 8$ ft, total outer surface area

$$A = 6s^2 = 6 \times 8^2 = 6 \times 64 = 384 \text{ ft}^2.$$

Step 2: Find paint required from coverage.

Coverage $= 16$ ft^2/kg $\Rightarrow$ paint needed

$$\text{kg} = \frac{384}{16} = 24 \text{ kg}.$$

Step 3: Multiply by unit cost.

$$\text{Cost} = 24 \times ₹\, 36.5 = \boxed{₹\, 876}.$$

Quick Tip

For solids, get the paintable area first (for a cube, $6s^2$), then divide by the coverage to get kilograms of paint, and finally multiply by price/kg.

Q27. 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:

Step 1: Convert time and find one-lap distance.

Time $t = 2.5$ s, speed $v = 66$ m/s. Distance in one lap (circumference):

$$C = vt = 66 \times 2.5 = 165 \text{ m}.$$

Step 2: Use circumference formula to get r.

$$C = 2\pi r \Rightarrow r = \frac{C}{2\pi} = \frac{165}{2 \times \frac{22}{7}} = \frac{165 \times 7}{44} = \frac{1155}{44} = \boxed{26.25 \text{ m}}.$$

Quick Tip

"Time to go around once" $\Rightarrow$ distance = circumference = vt. Then use $C = 2\pi r$ to solve for r.

Q28. 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) $4\frac{9}{6}\%$

(B) $5\left(\frac{5}{7}\right)\%$

(C) 5%

(D) 6%

Correct Answer: (D) 6%

Solution:

Step 1: Amount of salt initially.

Initial volume $= 6$ L, salt $= 5\%$ of 6 L $= 0.05 \times 6 = 0.30$ L (unchanged by evaporation).

Step 2: New volume after evaporation.

Water lost $= 1$ L $\Rightarrow$ remaining solution volume $= 6 - 1 = 5$ L.

Step 3: New concentration.

$$\% \text{ of salt} = \frac{\text{salt amount}}{\text{solution volume}} \times 100 = \frac{0.30}{5} \times 100 = 0.06 \times 100 = \boxed{6\%}.$$

Quick Tip

When solvent evaporates, the solute amount stays the same. New % concentration $= \dfrac{\text{old solute}}{\text{new total volume}} \times 100$.

Q29. 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:

Step 1: Reduce to last-two-digit arithmetic (mod 100).

For last two digits we can replace each factor by its last two digits:

$$122, 123, 125, 127, 129 \;\Rightarrow\; 22, 23, 25, 27, 29 \pmod{100}.$$

Step 2: Pair the factor 25 with the only even number 22.

$$25 \times 22 = 550 \equiv 50 \pmod{100}.$$

Key fact: $25\times$ (even but not a multiple of 4) $\Rightarrow$ ends with 50; if the even factor were a multiple of 4, the result would end with 00. Here $22 \equiv 2 \pmod 4$, so we get 50.

Step 3: Multiplying by any odd factor preserves the last two digits 50.

For any odd number o,

$$50 \times o = 50(2k+1) = 100k + 50 \equiv 50 \pmod{100}.$$

Since $23, 27, 29$ are all odd,

$$(22 \cdot 23 \cdot 25 \cdot 27 \cdot 29) \equiv 50 \pmod{100}.$$

$$\boxed{50}$$

Quick Tip

To get the last two digits, work $\bmod 100$. Combine 25 with the even factor first: $25\times$ (even, not multiple of 4) $\Rightarrow 50$; further multiplication by any odd number keeps the last two digits at 50.

Q30. 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:

Step 1: Translate the 200% increase.

Let the original fraction be $\frac{a}{b}$.

"Increase by 200%" means multiply by $1 + 2 = 3$. Hence the new fraction is

$$\frac{3a}{3b} = \frac{a}{b}.$$

So the "resultant fraction" equals the *original* fraction.

Step 2: Use the given resultant value.

Given resultant $= 2\frac{4}{5} = \frac{14}{5}$. Therefore

$$\frac{a}{b} = \frac{14}{5}.$$

Thus the original fraction is $\boxed{\frac{14}{5}}$.

Step 3: Compare with options.

$\frac{14}{5}$ is not among the listed options (A), (B), or (C), hence the correct choice is $\boxed{\text{None}}$.

Quick Tip

"Increase numerator and denominator by the same percentage" leaves the value of a fraction unchanged: $\frac{(1+p)a}{(1+p)b} = \frac{a}{b}$. So the "resultant" value is the original value.

Q31. The value of

$$\frac{\frac{1}{2} \text{ divided by } \left(\frac{1}{2} \text{ of } \frac{1}{2}\right)}{2 \ + \ \left(\frac{1}{2} \text{ of } 2\right)}$$

is

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

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

Solution:

Step 1: Evaluate the numerator using BODMAS.

"of" means multiplication and "divided by" means division:

$$\frac{1}{2} \div \left(\frac{1}{2} \times \frac{1}{2}\right) = \frac{1}{2} \div \frac{1}{4} = \frac{1}{2} \times \frac{4}{1} = 2.$$

Step 2: Evaluate the denominator.

$$2 + \left(\frac{1}{2} \times 2\right) = 2 + 1 = 3.$$

Step 3: Form the required value.

$$\frac{\text{numerator}}{\text{denominator}} = \frac{2}{3} = \boxed{\frac{2}{3}}.$$

Quick Tip

Translate "of" $\Rightarrow$ multiply and "divided by" $\Rightarrow$ divide. Tackle the top and bottom separately, then take their quotient.

Q32. 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:

Step 1: Assume a convenient total distance.

Let total distance $= 100$ km (any convenient number works for average-speed problems based on distance shares).

Step 2: Compute time on each leg.

60% of 100 km $= 60$ km at 40 kmph $\Rightarrow$ time $= \dfrac{60}{40} = 1.5$ h.

20% of 100 km $= 20$ km at 30 kmph $\Rightarrow$ time $= \dfrac{20}{30} = \dfrac{2}{3}$ h.

Remaining 20 km at 10 kmph $\Rightarrow$ time $= \dfrac{20}{10} = 2$ h.

Step 3: Total time and average speed.

$$T = 1.5 + \frac{2}{3} + 2 = \frac{9 + 4 + 12}{6} = \frac{25}{6} \text{ h}.$$

Average speed

$$v_{\text{avg}} = \frac{\text{Total distance}}{\text{Total time}} = \frac{100}{25/6} = 100 \cdot \frac{6}{25} = \boxed{24 \text{ kmph}}.$$

Quick Tip

When speeds are given over *fractions of distance*, pick a convenient total distance (e.g., 100 km), compute the time for each part, add them, then use $v_{\text{avg}} = \dfrac{D_{\text{total}}}{T_{\text{total}}}$.

Q33. 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:

Step 1: Represent the numbers from the ratio.

Let the numbers be $3x$ and $4x$ with $4x$ the larger.

Step 2: Translate the condition into an equation.

"The square of the greater is 504 less than 8 times the square of the other" $\Rightarrow$

$$(4x)^2 \;=\; 8(3x)^2 - 504.$$

Step 3: Solve for x.

$$16x^2 = 72x^2 - 504 \Rightarrow 56x^2 = 504 \Rightarrow x^2 = 9 \Rightarrow x = 3 \quad (\text{take } x > 0).$$

Step 4: Obtain the numbers.

$$3x = 3 \cdot 3 = 9, \qquad 4x = 4 \cdot 3 = 12.$$

$$\boxed{9 \text{ and } 12}$$

Quick Tip

When a ratio is given, write the numbers as kx and lx. Square relations become simple equations in x^2, which are quick to solve.

Q34. A bag contains 100 tickets numbered $1, 2, 3, \ldots, 100$. If one ticket is drawn at random, what is the probability that the ticket drawn has the digit 2 appearing on it?

(A) $\dfrac{21}{100}$
(B) $\dfrac{19}{100}$
(C) $\dfrac{32}{100}$
(D) $\dfrac{23}{100}$

Correct Answer: (B) $\dfrac{19}{100}$

Solution:

Step 1: Count numbers with a 2 in the unit's place.

Between 1 and 100, these are $2, 12, 22, \ldots, 92$: 10 numbers.

Step 2: Count numbers with a 2 in the ten's place.

These are $20, 21, 22, \ldots, 29$: again 10 numbers.

Step 3: Use inclusion–exclusion to avoid double counting.

The number 22 is common to both groups, so

$$\#(\text{contains a digit } 2) = 10 + 10 - 1 = 19.$$

Step 4: Probability.

Total outcomes $= 100$. Hence

$$P(\text{digit } 2 \text{ appears}) = \frac{19}{100} = \boxed{\frac{19}{100}}.$$

Quick Tip

When asked for "contains a digit", count *by positions* (units, tens, etc.) and apply inclusion–exclusion to subtract overlaps like 22.

Q35. 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:

Step 1: Convert the train's speed to m/s.

$$54 \text{ km/h} = 54 \times \frac{1000}{3600} = \frac{54}{3.6} = 15 \text{ m/s}.$$

Step 2: Find the train's length using the time to pass a man.

Passing a stationary man means the train covers exactly its own length L.

Time $t_1 = 20$ s, speed $v = 15$ m/s $\Rightarrow$

$$L = vt_1 = 15 \times 20 = 300 \text{ m}.$$

Step 3: Use the time to pass the platform to get the platform length.

Passing a platform of length P means the train covers $L + P$.

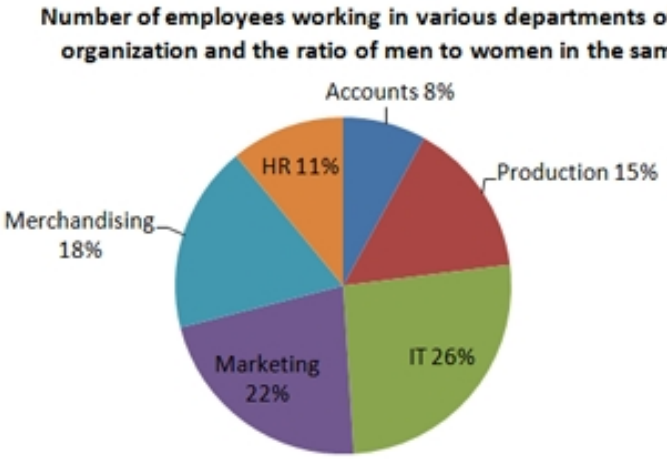
Time $t_2 = 36$ s $\Rightarrow$ distance covered

$$vt_2 = 15 \times 36 = 540 \text{ m} = \ L + P \ \Rightarrow \ P = 540 - 300 = \boxed{240 \text{ m}}.$$

Quick Tip

For trains: "pass a man" $\Rightarrow$ distance = train length; "pass a platform/bridge" $\Rightarrow$ distance = train length + platform length. Always convert km/h to m/s using $\frac{5}{18}$ and use distance = speed $\times$ time.

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



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

Table 1: Ratio of men to women in different departments. Total number of employees = 4600.

Q36. What is the number of women in the **Accounts** department?

(A) 86

(B) 102

(C) 80

(D) 92

Correct Answer: (D) 92

Solution:

Step 1: Find headcount of Accounts.

Total employees $= 4600$. Accounts accounts for 8% of the company (from the pie chart).

$$\text{Accounts headcount} = 0.08 \times 4600 = \frac{8}{100} \times 4600 = 368.$$

Step 2: Split by the given men:women ratio.

For Accounts, men:women $= 3 : 1$. Total parts $= 3 + 1 = 4$.

Women share $= \frac{1}{4}$ of 368:

$$\text{Women in Accounts} = \frac{1}{4} \times 368 = \boxed{92}.$$

(Then men $= \frac{3}{4} \times 368 = 276$ as a quick check: $276 + 92 = 368$.)

Quick Tip

When a department's headcount percentage and a men:women ratio are given, first convert the percentage to an absolute headcount, then multiply by the fraction of the ratio (e.g., women $= \frac{\text{women part}}{\text{total parts}}$).

Q37. 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:

Step 1: Combine the percentages.

IT $= 26\%$, HR $= 11\% \Rightarrow$ together $= 26\% + 11\% = 37\%$.

Step 2: Apply to the total strength.

$$\text{Employees in (IT+HR)} = 0.37 \times 4600 = \frac{37}{100} \times 4600 = 37 \times 46.$$

Step 3: Multiply cleanly.

$$37 \times 46 = 37(40 + 6) = 1480 + 222 = \boxed{1702}.$$

Quick Tip

For combined categories, add their percentages first, then apply once to the grand total.

For mental math, break ab as $a(b_1 + b_2)$.

Q38. 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:

Step 1: Convert department shares (from the pie chart) to headcounts.

Total employees $= 4600$.

$$\text{HR } (11\%) : 0.11 \times 4600 = 506,$$

$$\text{Accounts } (8\%) : 0.08 \times 4600 = 368,$$

$$\text{Production } (15\%) : 0.15 \times 4600 = 690,$$

$$\text{IT } (26\%) : 0.26 \times 4600 = 1196,$$

$$\text{Marketing } (22\%) : 0.22 \times 4600 = 1012,$$

$$\text{Merchandising } (18\%) : 0.18 \times 4600 = 828.$$

Step 2: Use the men:women ratios from the table to split each headcount.

$$\text{HR } (1:1): \quad \text{Men} = \tfrac{1}{2} \cdot 506 = 253, \quad \text{Women} = 253.$$

$$\text{Accounts } (3:1): \quad \text{Men} = \tfrac{3}{4} \cdot 368 = 276, \quad \text{Women} = 92.$$

$$\text{Production } (3:2): \quad \text{Men} = \tfrac{3}{5} \cdot 690 = 414, \quad \text{Women} = 276.$$

$$\text{IT } (1:3): \quad \text{Men} = \tfrac{1}{4} \cdot 1196 = 299, \quad \text{Women} = 897.$$

$$\text{Marketing } (1:1): \quad \text{Men} = \tfrac{1}{2} \cdot 1012 = 506, \quad \text{Women} = 506.$$

$$\text{Merchandising } (5:1): \quad \text{Men} = \tfrac{5}{6} \cdot 828 = 690, \quad \text{Women} = 138.$$

Step 3: Sum men and women across all departments.

$$\text{Total men} = 253 + 276 + 414 + 299 + 506 + 690 = 2438,$$

Total women=253+92+276+897+506+138=2162.

Step 4: Form and simplify the ratio.

$$\text{Men} : \text{Women} = 2438 : 2162 = \frac{2438/23}{2162/23} = 1219 : 1081 = \boxed{53 : 47}.$$

Quick Tip

With department percentages and gender ratios, first turn percentages into headcounts, then multiply by the fraction of each gender (e.g., men part / total parts). Add, and finally reduce the grand ratio by the GCD.

Q39. 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:

Step 1: Headcount in Merchandising.

18% of $4600 \Rightarrow 0.18 \times 4600 = 828$ employees.

Step 2: Women in Merchandising using men:women $= 5 : 1$**.**

Total parts $= 6 \Rightarrow$ women $= \frac{1}{6} \times 828 = 138$.

Step 3: Percentage w.r.t. the whole company.

$$\% \text{ of women in Merchandising} = \frac{138}{4600} \times 100 = \frac{138}{46} \times \frac{1}{46} \times 100 = \frac{3}{100} \times 100 = \boxed{3\%}.$$

Quick Tip

Department share $\rightarrow$ headcount, then apply the gender ratio. To convert a subgroup to $\%$ of total, divide by the company total and multiply by 100.

Q40. 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:

Step 1: Convert department percentages to headcounts.

Total employees $= 4600$.

Production share $= 15\% \Rightarrow 0.15 \times 4600 = 690$.

Marketing share $= 22\% \Rightarrow 0.22 \times 4600 = 1012$.

Step 2: Split by the given men:women ratios.

Production ratio (men:women) $= 3 : 2 \Rightarrow$ men are $\dfrac{3}{3+2} = \dfrac{3}{5}$ of the department.

$$\text{Men in Production} = \frac{3}{5} \times 690 = 414.$$

Marketing ratio (men:women) $= 1 : 1 \Rightarrow$ men are $\dfrac{1}{2}$ of the department.

$$\text{Men in Marketing} = \frac{1}{2} \times 1012 = 506.$$

Step 3: Form and simplify the ratio.

$$\text{Required ratio} = 414 : 506 = \frac{414}{46} : \frac{506}{46} = 9 : 11.$$

$$\boxed{9 : 11}$$

Quick Tip

For each department: headcount = (company total)×(department %), then multiply by the men's share from the men:women ratio. Reduce the final ratio by the GCD to simplest form.

Q41. DRIVEN : EIDRVN :: BEGUM : ?

(A) EUBGM

(B) MGBEU

(C) BGMEU

(D) UEBGM

Correct Answer: (A) EUBGM

Solution:

Step 1: Infer the rule from the model pair.

Word DRIVEN has letters D, R, I, V, E, N.

Vowels $= \{I, E\}$ (alphabetical order E, I).

Consonants in the *original order of appearance* $= \{D, R, V, N\}$.

Placing vowels first (alphabetical) and then the consonants (as they occur) gives

$$\text{DRIVEN} \;\Rightarrow\; E\,I\,D\,R\,V\,N = \text{EIDRVN},$$

which matches the given mapping.

(*Note:* If we alphabetized the consonants too, we would get $EIDNRV$, which does *not* match; hence consonant order is preserved.)

Step 2: Apply the rule to BEGUM.

Letters: B, E, G, U, M. Vowels $= \{E, U\} \Rightarrow$ alphabetical E, U.

Consonants in original order $= \{B, G, M\}$.

Place vowels first, then consonants:

$$\text{BEGUM} \;\Rightarrow\; E\,U\,B\,G\,M = \boxed{\text{EUBGM}}.$$

Quick Tip

When a letter-analogy shows vowels clustered at the front, check whether the consonants are kept in original order or alphabetized. Verify the rule on the given exemplar before applying it.

Q42. Shout : Whisper :: Run : ?

(A) Stay

(B) Stand

(C) Walk

(D) Hop

Correct Answer: (C) Walk

Solution:

Step 1: Understand the relation in the stem pair.

"Shout" and "Whisper" lie at opposite ends of the *loudness* scale (very loud vs. very soft). They are contrasting/extreme forms on the same activity (speaking).

Step 2: Map the relation to movement.

For locomotion, "Run" and "Walk" are contrasting levels on the *speed* scale (fast vs. slow) of the same activity (moving on foot).

Step 3: Eliminate distractors.

"Stay" and "Stand" imply no motion, breaking the shared-activity relation; "Hop" is a different gait, not the slower counterpart of running.

Walk

Quick Tip

In analogy questions, identify the *dimension* connecting the pair (here, degree on a common scale). Then select the option that shares that dimension and stands at the corresponding level.

Q43. *Question below has a three statement, followed by four conclusions numbered I, II, III and IV. You have to consider every given statement as true (even if it does not conform to well-known facts). Read the conclusions and then decide which of the conclusions can be logically derived.*

Statements:

I. Some toys are pens.

II. Some pens are papers.

III. Some papers are black.

Conclusions:

I. Some toys are black.

II. No pen is black.

III. No toy is black.

IV. Some pens are black.

(A) None follows

(B) Either II or IV

(C) Either I or III and either II or IV

(D) Either I or IV

(E) All of the above

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

Solution:

Step 1: Translate the statements to set relations.

Let T, P_a, Pa, B denote the sets of Toys, Pens, Papers and Black objects respectively. The three statements yield:

$$T \cap P_a \neq \varnothing, \qquad P_a \cap Pa \neq \varnothing, \qquad Pa \cap B \neq \varnothing.$$

No other intersections are forced.

Step 2: Check what *must* be true.

From the above, nothing compels T to meet B, nor P_a to meet B. Hence conclusions I ("some toys are black") and IV ("some pens are black") are *possible* but not necessary; their negations III ("no toy is black") and II ("no pen is black") are also *possible*. Therefore we look for mutually exclusive but exhaustive pairs.

Step 3: Exhibit two valid diagrams (possibility method).

Case A (overlap with pens): Let the part $Pa \cap B$ intersect P_a. Then $P_a \cap B \neq \varnothing \Rightarrow$ conclusion IV true & II false. If we also allow the common element of $T \cap P_a$ to lie in B, then $T \cap B \neq \varnothing \Rightarrow$ I true and III false.

Case B (no overlap with pens): Let $Pa \cap B$ lie entirely outside P_a. Then $P_a \cap B = \varnothing \Rightarrow$ II true & IV false. If the region $T \cap P_a$ is also outside B, then $T \cap B = \varnothing \Rightarrow$ III true and I false.

Step 4: Logical consequence.

- I and III are a complementary pair regarding $T \cap B$: exactly one is true in any admissible diagram.

- II and IV are a complementary pair regarding $P_a \cap B$: exactly one is true in any admissible diagram.

Hence the correct form of conclusion is:

$$\boxed{\text{Either I or III } \textit{and} \text{ either II or IV.}}$$

Quick Tip

For syllogisms with only "some" statements, use the *possibility method*: sketch Venns that satisfy the premises and see which conclusions are *always* true, *never* true, or depend on placement. Complementary pairs like "some X are Y" vs "no X is Y" often yield "either–or" results.

Q44. 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: Decode rates.

A's kill rate $= \frac{1}{3}$ per shot; B's kill rate $= \frac{1}{2}$ per shot $\Rightarrow$ B's miss rate $= \frac{1}{2}$ per shot. Shots ratio A:B $= 5 : 3$.

Step 2: Use B's misses to find B's shots.

If B has missed 27 times and misses $\frac{1}{2}$ of his shots, then

$$\text{Shots}_B = \frac{27}{1/2} = 54.$$

Step 3: Find A's shots from the ratio.

$$\text{Shots}_A = \frac{5}{3} \times 54 = 90.$$

Step 4: Convert A's shots to kills.

$$\text{Kills by A} = \frac{1}{3} \times 90 = \boxed{30}.$$

Quick Tip

Turn "once in k shots" into a per–shot probability $\frac{1}{k}$ (and miss rate $1 - \frac{1}{k}$). Use given misses to back out total shots, then apply shot ratios and kill rates.

Q45. At what time between 9 PM and 10 PM will the minute hand and the hour hand be *opposite* to each other?

(A) $9{:}15\,\frac{4}{11}$
(B) $9{:}16\,\frac{4}{11}$
(C) $9{:}12\,\frac{4}{11}$
(D) None of these

Correct Answer: (B) $9{:}16\,\frac{4}{11}$

Solution:

Step 1: Angles at 9:00.

At $9{:}00$, hour hand angle $= 270°$; minute hand angle $= 0°$. Initial separation $= 270°$.

Step 2: Speeds of the hands.

Minute hand $= 6°/\text{min}$; hour hand $= 0.5°/\text{min}$. Relative speed
$= 6 - 0.5 = 5.5°/\text{min} = \frac{11^\circ}{2}\,/\text{min}$.

Step 3: Distance (in degrees) to become opposite.

Opposite $\Rightarrow$ separation $= 180°$. From $270°$ to $180°$ requires a decrease of $90°$.

Step 4: Time required.

$$t = \frac{90^\circ}{5.5^\circ/\text{min}} = \frac{180}{11}\ \text{min} = 16\,\frac{4}{11}\ \text{min}.$$

Hence the time is

$$\boxed{9{:}16\,\frac{4}{11}}.$$

Quick Tip

For "between h and $h+1$," set separation change = required angle change and divide by the *relative* speed $6 - 0.5 = 5.5^\circ/\text{min}$. At $9{:}00$ the separation is 270°.

Q46. Read the following information and answer the question:

'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.

If $P \times Q - S$, which of the following is true?

(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:

Step 1: Decode each symbol from left to right.

$P \times Q \Rightarrow P$ is the *son* of Q. So P is male and Q is a parent.

$Q - S \Rightarrow Q$ is the *wife* of S. Hence Q is female and S is her husband (male).

Step 2: Combine the relations.

Since Q is the wife of S and P is the son of Q, P is the child of the couple S (husband) and Q (wife). Therefore S is the *father* of P.

$\boxed{S \text{ is father of } P}$

Quick Tip

In symbol-coded family problems, translate each operator into a plain relation and read the chain left to right. Keep track of genders implied by terms like "son" and "wife" to identify the exact parent (father/mother).

In a school students at Pioneer career Kolkata wrote Mock test which has three subjects DI, VA and QA, here is the result of these students. 80 students cleared cut off in DI, 70 in VA and 60 in QA. Only 40 students cleared all the three subjects. 10 students failed to clear cut off even in one subjects. 50 students cleared cut off in VA and QA. 5 students cleared in cut off in only QA.

Q47. In a school students at Pioneer Career Kolkata wrote a Mock test with three subjects DI, VA and QA. Results: 80 students cleared the cut–off in DI, 70 in VA and 60 in QA. Only 40 students cleared *all three*. 10 students failed to clear the cut–off in even one subject (i.e., cleared none). 50 students cleared the cut–off in *VA and QA* (together). 5 students cleared the cut–off in *only* QA. 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 the three sets be D, V, Q for DI, VA, QA. We are given:

$$|D| = 80,\ |V| = 70,\ |Q| = 60,\ |D \cap V \cap Q| = 40,\ |V \cap Q| = 50,\ |Q \text{ only}| = 5,\ |\text{none}| = 10.$$

Step 1: Fix the two-way intersections involving Q.

Since $|V \cap Q| = 50$ and the triple is 40, we have

$$|V \cap Q \text{ only}| = 50 - 40 = 10.$$

Also, using $|Q| = 60$,

$$|Q| = \underbrace{|Q \text{ only}|}_{5} + \underbrace{|D \cap Q \text{ only}|}_{?} + \underbrace{|V \cap Q \text{ only}|}_{10} + \underbrace{|D \cap V \cap Q|}_{40} \Rightarrow |D \cap Q \text{ only}| = 5.$$

Step 2: Let $y = |D \cap V|$ (including the triple).

Then $|D \cap V \text{ only}| = y - 40$ (nonnegative). Use totals of D and V to express the "only" parts:

$$|D| = |D \text{ only}| + |D \cap V \text{ only}| + |D \cap Q \text{ only}| + |D \cap V \cap Q|$$

$$80 = |D \text{ only}| + (y - 40) + 5 + 40 \;\Rightarrow\; |D \text{ only}| = 75 - y,$$

$$|V| = |V \text{ only}| + |D \cap V \text{ only}| + |V \cap Q \text{ only}| + |D \cap V \cap Q|$$

$$70 = |V \text{ only}| + (y - 40) + 10 + 40 \;\Rightarrow\; |V \text{ only}| = 60 - y.$$

Feasibility requires $y \geq 40$ and $75 - y \geq 0,\ 60 - y \geq 0$, hence $40 \leq y \leq 60$.

Step 3: Minimize the total who *cleared at least one*.

Union size

$$|D \cup V \cup Q| = \underbrace{|D \text{ only}|}_{75-y} + \underbrace{|V \text{ only}|}_{60-y} + \underbrace{|Q \text{ only}|}_{5} + \underbrace{|D \cap V \text{ only}|}_{y-40} + \underbrace{|D \cap Q \text{ only}|}_{5} + \underbrace{|V \cap Q \text{ only}|}_{10} + \underbrace{|D \cap V \cap Q|}_{40}.$$

This simplifies to

$$|D \cup V \cup Q| = (75 - y) + (60 - y) + (y - 40) + 5 + 5 + 10 + 40 = 155 - y.$$

To make the total *minimum*, maximize y (i.e., maximize overlap $D \cap V$). Using $y_{\max} = 60$,

$$|D \cup V \cup Q|_{\min} = 155 - 60 = 95.$$

Step 4: Add the students who cleared none.

Total appeared $= |D \cup V \cup Q| + |\text{none}| = 95 + 10 = \boxed{105}$.

Quick Tip

To minimize the union size with fixed set totals, push as much mass as possible into the intersections (maximize overlaps) subject to the constraints already given.

Q48. 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 in exactly two subjects" $\Rightarrow$ "cleared in *exactly one* subject." Let the numbers in the *exactly one* regions be

$$D_{\text{only}} = d, \quad V_{\text{only}} = v, \quad Q_{\text{only}} = 5.$$

From Q47 we already fixed

$$|D \cap Q \text{ only}| = 5, \quad |V \cap Q \text{ only}| = 10, \quad |D \cap V \cap Q| = 40.$$

Let $x = |D \cap V \text{ only}|$ (so total $D \cap V$ is $x + 40$).

Step 1: Use the subject totals to link d, v, x.

$$80 = d + x + 5 + 40 \quad \Rightarrow \quad d = 35 - x,$$

$$70 = v + x + 10 + 40 \quad \Rightarrow \quad v = 20 - x.$$

Feasibility: $d \geq 0,\ v \geq 0 \Rightarrow x \leq 35,\ x \leq 20$, and $x \geq 0$.

Step 2: Minimize the count with exactly one subject.

Let a be the required number:

$$a = d + v + Q_{\text{only}} = (35 - x) + (20 - x) + 5 = 60 - 2x.$$

To make a as small as possible, take x as large as possible: $x_{\max} = 20$. Thus

$$a_{\min} = 60 - 2(20) = \boxed{20}.$$

Quick Tip

When asked for a minimum/maximum with set counts, assign variables to the "exactly" regions, write equations from the set totals, and express the target in terms of one variable; then push that variable to its feasible bound.

Q49. 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: (A) $3:1$

Solution:

From the stem (used in Q47–48):

$$|D| = 80,\ |V| = 70,\ |Q| = 60,\ |D \cap V \cap Q| = 40,\ |V \cap Q| = 50,\ |Q \text{ only}| = 5,\ |\text{none}| = 10.$$

Step 1: Fix regions inside Q.

Since $|V \cap Q| = 50$ and the triple is 40,

$$|V \cap Q \text{ only}| = 50 - 40 = 10.$$

Hence, using $|Q| = 60$,

$$|D \cap Q \text{ only}| = 60 - \underbrace{|Q \text{ only}|}_{5} - \underbrace{|V \cap Q \text{ only}|}_{10} - \underbrace{|D \cap V \cap Q|}_{40} = 5.$$

Step 2: Translate the two requested counts.

- "didn't clear DI but cleared QA" $= Q \cap D^c =$ (QA only) + (VA∩QA only)

$$= 5 + 10 = 15.$$

- "didn't clear *only* VA" = failed VA but passed the other two $=\ D \cap Q$ only $= 5$.

Step 3: Form the ratio.

$$15 : 5 = \boxed{3 : 1}.$$

Quick Tip

"Didn't clear only VA" means failed VA but cleared DI and QA $\Rightarrow$ the $D \cap Q$–only region. "Cleared QA but not DI" collects Q–only and $V \cap Q$–only.

Q50. 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:

Let $x = |D \cap V \text{ only}|$ (students clearing exactly DI and VA). From earlier computations:

$$|V \cap Q \text{ only}| = 10, \quad |D \cap Q \text{ only}| = 5, \quad |Q \text{ only}| = 5, \quad |D \cap V \cap Q| = 40.$$

Totals of D and V give

$$|D \text{ only}| = 80 - (x + 5 + 40) = 35 - x,$$
$$|V \text{ only}| = 70 - (x + 10 + 40) = 20 - x.$$

(All are ≥ 0, so $0 \leq x \leq 20$.)

Step 1: Maximize those who fail ≥ 2 subjects.

"Fail at least two" = fail exactly two $\cup$ fail all three

$$= \underbrace{(|D \text{ only}| + |V \text{ only}| + |Q \text{ only}|)}_{\text{fail exactly two}} + \underbrace{|\text{none}|}_{\text{fail all three}} = (35 - x) + (20 - x) + 5 + 10 = 70 - 2x.$$

This is maximized when x is minimized, i.e. $x = 0$.

Step 2: Count those who fail *exactly one*.

Fail exactly one $\iff$ clear exactly two, whose count is

$$|D \cap V \text{ only}| + |D \cap Q \text{ only}| + |V \cap Q \text{ only}| = x + 5 + 10.$$

At $x = 0$ (from the maximizing condition above) this equals

$$0 + 5 + 10 = \boxed{15}.$$

Quick Tip

To push "fail in at least two" to the maximum, minimize the $D \cap V$–only region x (subject to feasibility). Then "fail exactly one" equals the total in the three two-way-only regions.

Q51. 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 from among: blue, black, red, yellow and green. U likes red and blue. T likes black. The person living in a palace does not like black or blue. P likes blue and red. M likes yellow. X lives in a hotel. M lives in a:

(A) Hut

(B) Palace

(C) Fort

(D) House

Correct Answer: (B) Palace

Solution:

Step 1: Record the direct facts.

• X *lives in a hotel*.

• U likes {red, blue}; P likes {blue, red} (i.e., also contains blue).

• T likes black (one of T's two colors is black).

• Palace-resident *does not like black or blue*.

Step 2: Eliminate who cannot be in the palace.

From the palace rule: no **black** and no **blue**.

$\Rightarrow$ T cannot be in the palace (likes black).

$\Rightarrow$ U cannot be in the palace (likes blue).

$\Rightarrow$ P cannot be in the palace (likes blue).

So the palace candidate is among $\{M, X\}$.

Step 3: Use the location fixed for X.

Given X lives in a *hotel* $\Rightarrow$ X is *not* in the palace.

Therefore the only remaining feasible person for the palace is M.

Step 4: Conclude.

Hence, M lives in the **palace**.

Palace

Quick Tip

In assignment/elimination puzzles, first apply hard exclusions tied to a single slot (here: palace forbids black/blue). Cross off all disqualified candidates, then use any fixed placements (X in hotel) to pinpoint the remaining feasible candidate.

Q52. 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) 10^{th}

(B) 11^{th}

(C) 12^{th}

(D) Data inadequate

Correct Answer: (D) Data inadequate

Solution:

Step 1: Translate each statement into a set of possible dates.

"After 8th but before 13th" (strict) $\Rightarrow \{9, 10, 11, 12\}$.

"After 9th but before 14th" (strict) $\Rightarrow \{10, 11, 12, 13\}$.

Step 2: Combine information (intersection).

Common dates $= \{9, 10, 11, 12\} \cap \{10, 11, 12, 13\} = \{10, 11, 12\}$.

Step 3: Decide uniqueness.

Since more than one date remains, the exact date *cannot* be determined uniquely $\Rightarrow$ **Data inadequate**.

$$\boxed{\text{Data inadequate (possible dates: } 10^{\text{th}}, 11^{\text{th}}, 12^{\text{th}})}$$

Quick Tip

Treat "after"/"before" as strict inequalities (exclude the mentioned endpoints). Convert each memory into a range, take the intersection, and check if a single value remains; if not, choose "Data inadequate."

Q53. 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:

Step 1: Fix axes and orientation.

Take the starting point as the origin $(0, 0)$ with East as $+x$ and North as $+y$. Rohit first faces South.

Step 2: Trace every move as coordinates (keep track of facing).

- Move 25 m South: $(0, 0) \to (0, -25)$; facing South.
- Turn left from South $\Rightarrow$ face East; walk 20 m: $(0, -25) \to (20, -25)$; facing East.
- Turn left from East $\Rightarrow$ face North; walk 25 m: $(20, -25) \to (20, 0)$; facing North.
- Turn right from North $\Rightarrow$ face East; walk 15 m: $(20, 0) \to (35, 0)$; facing East.

Step 3: Net displacement and direction.

Final coordinates are $(35, 0)$ relative to start $(0, 0)$.

Distance $= \sqrt{(35 - 0)^2 + (0 - 0)^2} = 35$ m; direction is along $+x$ (East).

$$\boxed{35 \text{ metres East}}$$

Quick Tip

For turn-walk puzzles, track the *current facing* at each turn (left/right are relative), convert each leg into an $(\Delta x, \Delta y)$ vector, then add vectors and compute the resultant.

Q54. In the following question, a statement is given followed by two conclusions I and II. Give answer:

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: (D) neither I nor II follows

Solution:

Step 1: Parse the statement precisely.

"The best way to escape from a problem is to solve it" asserts a *method preference* when a problem exists, solving it is the most effective way to get rid of it. It says nothing about life without problems, nor about possessing ready-made solutions.

Step 2: Test Conclusion I.

"I. Your life will be dull if you don't face problem."

This talks about the quality of life in the *absence* of problems. The statement does not discuss consequences of not having problems; it only compares ways to escape when a problem exists.

$\Rightarrow$ Conclusion I does *not* logically follow.

Step 3: Test Conclusion II.

"II. To escape from problem, you should *always* have some solutions with you."

The statement prescribes *solving* as the best escape but does not require pre-possessing solutions, nor the word "always." It gives a strategy, not a prerequisite.

$\Rightarrow$ Conclusion II does *not* follow.

Step 4: Decision.

Neither I nor II is a necessary consequence of the statement.

Option (D): Neither I nor II follows

Quick Tip

In statement–conclusion questions, stick strictly to what is asserted. Words like "always," claims about different contexts (e.g., life without problems), or new conditions not present in the statement usually make a conclusion invalid.

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.

Q55. 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.

(A) 2^{nd}

(B) 3^{rd}

(C) 6^{th}

(D) 5^{th}

Correct Answer: (C) 6^{th}

Solution:

Step 1: Fix what the two special schools imply.

Trinity $\Rightarrow$ only chess; Mansorover $\Rightarrow$ only cricket.

Mahi, Nilesh are cricketers $\Rightarrow$ both must be at **Mansorover**.

Children at Mansorover were born in succession $\Rightarrow$ **Mahi and Nilesh are consecutive in birth order**.

Arun plays football $\Rightarrow$ he cannot be at Trinity or Mansorover $\Rightarrow$ **Arun is at St. Stefan**.

Given Tamanna and Rohit are also at St. Stefan $\Rightarrow$ St. Stefan has {Arun, Tamanna, Rohit}.

Hence Trinity must take the remaining three: {Saurav, Kuntala, Janki} (and they therefore play chess).

Step 2: Use birth-order facts.

(i) "Three sons were born first, followed by two daughters."

$\Rightarrow$ Positions 1–3 are **sons**; positions 4–5 are **daughters**.

(ii) Saurav is eldest $\Rightarrow$ **Pos 1 = Saurav**.

(iii) Kuntala is the *eldest daughter* $\Rightarrow$ among the two consecutive daughters (Pos 4 & 5), **Pos 4 = Kuntala**, **Pos 5 = Tamanna**.

(iv) Janki is youngest; Rohit is born just before Janki $\Rightarrow$ **Pos 8 = Janki**, **Pos 7 = Rohit**.

Step 3: Place Mahi and Nilesh (consecutive cricketers).

They must be consecutive and are *sons*. The only consecutive son slots available are **Pos 2 & 3** (since Pos 6 is separated from Pos 7 by Rohit).

$\Rightarrow$ **Pos 2,3 = {Mahi, Nilesh}** (in some order).

Step 4: Place the remaining son, Arun.

The only unfilled position left for a son is **Pos 6**.

Therefore **Arun is 6th** in birth order.

Arun is the 6th child of Mr. Mansingh.

Quick Tip

Blend category constraints (school ⇒ sport) with "consecutive" and birth-order slots. First lock positions forced by *eldest/youngest/just before*, then fit any remaining consecutive pair.

Q56. Saurav is a student of which school?

(A) Trinity

(B) St. Stefan

(C) Mansorover

(D) Cannot be determined

Correct Answer: (A) Trinity

Solution:

Step 1: Decode school–sport rules.

Mansorover ⇒ only **cricket**; Trinity ⇒ only **chess**. No other games are offered by these two schools.

Step 2: Place children using given data.

Mahi and Nilesh are cricketers ⇒ both must be at **Mansorover** (also "Mansorover students are born in succession," consistent with Mahi–Nilesh).

Arun plays football ⇒ cannot be at Mansorover or Trinity ⇒ **Arun is at St. Stefan**.

Given **Tamanna and Rohit** study at St. Stefan ⇒ St. Stefan has {Arun, Tamanna, Rohit}.

Step 3: Use the headcount constraints.

Exactly three study at Trinity and three at St. Stefan. Since St. Stefan already has three (Arun, Tamanna, Rohit) and Mansorover has two (Mahi, Nilesh), the remaining three children {Saurav, Kuntala, Janki} must fill Trinity.

⇒ **Saurav is at Trinity**.

Trinity

Quick Tip

When schools constrain sports, first place those with fixed sports into the only compatible school. Then use "exactly k students per school" counts to place the remaining children.

Q57. What game does Tamanna play?

(A) Cricket

(B) Hockey

(C) Football

(D) Cannot be determined

Correct Answer: (D) Cannot be determined

Solution:

Step 1: Fix Tamanna's school.

Given "Tamanna and Rohit study at St. Stefan." Hence **Tamanna is at St. Stefan**.

Step 2: Recall what each school offers.

Mansorover $\Rightarrow$ only cricket; Trinity $\Rightarrow$ only chess; these two offer no other games. The statement does *not* restrict St. Stefan—it can have games other than cricket/chess (e.g., football, hockey), as seen: Arun (St. Stefan) plays football and Rohit (St. Stefan) plays hockey.

Step 3: Check if Tamanna's game is implied.

Being at St. Stefan does not force a unique sport. We know only that it is *not* fixed by the rules. It could be football, hockey, or another allowed game at St. Stefan. No further condition mentions Tamanna's sport.

$\Rightarrow$ **Insufficient information to identify a single game**.

Data cannot be determined

Quick Tip

After locking locations, ask whether the location uniquely determines the attribute. If multiple values remain feasible (here, several sports at St. Stefan), the correct choice is "Cannot be determined."

Q58. 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: (B) Kuntala and Arun

Solution:

Step 1: Recall the established birth order from the set-up.

From earlier deductions: 1 : Saurav, 2–3 : Mahi & Nilesh (consecutive, order interchangeable), 4 : Kuntala, 5 : Tamanna, 6 : Arun, 7 : Rohit, 8 : Janki.

Also, Rohit is just before Janki (positions $7, 8$).

Step 2: Test each option for consecutiveness.

- **(A) Mahi and Nilesh**: positions 2 and 3 $\Rightarrow$ consecutive $\Rightarrow$ *born in succession*.
- **(B) Kuntala and Arun**: positions 4 and 6 with Tamanna at 5 in between $\Rightarrow$ *not* consecutive.
- **(C) Rohit and Janki**: positions 7 and 8 $\Rightarrow$ consecutive $\Rightarrow$ *born in succession*.
- **(D) Arun and Rohit**: positions 6 and 7 $\Rightarrow$ consecutive $\Rightarrow$ *born in succession*.

Step 3: Conclude.

Only the pair **Kuntala & Arun** are *not* consecutive in the birth order.

$$\boxed{\text{Kuntala and Arun}}$$

Quick Tip

When asked who is *not* in succession, list the final positions and check each option by index—consecutive positions differ by exactly 1 (e.g., 2–3, 6–7, 7–8). Any pair with a gap > 1 is not in succession.

Q59. 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:

Step 1: Translate premises.

- P1: Every student plays *either* chess or checkers.
- P2: Some checkers players do not play chess because they don't understand chess strategy.
- P3: No backgammon player plays checkers (they don't find it challenging).
- Fact: Wendy is a backgammon player.

Step 2: Deduce Wendy's game among {chess, checkers}.

From P3, Wendy *does not* play checkers. From P1 (exhaustive "either"), if not checkers $\Rightarrow$ Wendy plays **chess**.

Step 3: What extra premise is needed to reach the stated conclusion?

The conclusion claims: "Wendy must *understand chess strategy*." We already have "Wendy plays chess" but that alone doesn't guarantee understanding. To make the inference valid, we need:

(Needed assumption) : All chess players understand chess strategy.

With this, since Wendy plays chess $\Rightarrow$ Wendy understands chess strategy.

Step 4: Eliminate other options.

(B) and (C) compare challenge levels; the argument never uses such comparisons.

(D) speaks about those who find backgammon challenging playing checkers—irrelevant and contradicts P3 if taken broadly.

Therefore, (A) is the required assumption.

Quick Tip

When a conclusion adds a *new property* (here, "understands strategy"), look for a bridge assumption that links the derived category to that property (chess player $\Rightarrow$ understands strategy).

Q60. 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:

Step 1: Read the stance in the statement.

The speaker says growth has been achieved, but at the "terrible price" of *increased industrial and vehicular pollution*. This:

- links pollution to industrial/vehicular activity (a feature accompanying industrial society);
- evaluates the cost as undesirable while still talking about growth as something pursued.

Step 2: Test each assumption.

Assumption I: "Pollution is a part of industrial society."

The statement ties growth to increased *industrial/vehicular* pollution, implying pollution accompanies industrialization. $\Rightarrow$ **Implicit**.

Assumption II: "Indian economic growth is based on *only* industrial growth."

The statement never restricts the sources of growth to industry alone (services, agriculture may contribute). The cost named is from industrial/vehicular pollution, but that doesn't mean growth is only industrial. $\Rightarrow$ **Not implicit**.

Assumption III: "A country desires economic growth with manageable side-effects."

Calling pollution cost "terrible" presumes growth is desirable but ideally with *manageable* externalities; otherwise the lament about the price would be pointless. $\Rightarrow$ **Implicit**.

Step 3: Conclude.

Only I and III are implicit.

$$\boxed{\text{Only I and III are implicit}}$$

Quick Tip

Watch for extreme words like "only" in options—statements rarely license such exclusivity. Also, when a statement calls a side-effect "a terrible price," it typically assumes the goal is desirable but should come with *controlled* costs.

Q61. 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:

Step 1: List the base members and their genders.

Father (male), Mother (**female**), 3 married sons (all male), and 1 unmarried daughter (**female**).

So far, females = Mother (1) + Unmarried daughter (1) $\Rightarrow$ **2 females**.

Step 2: Account for the daughters-in-law (wives of the married sons).

There are 3 married sons $\Rightarrow$ 3 wives, all **female**.

Add 3 to the female count: $2 + 3 = \mathbf{5}$.

Step 3: Account for the grandchildren.

Two sons have 2 daughters each $\Rightarrow 2 \times 2 = 4$ granddaughters (**female**).

The third son has a son (**male**), so it does not change the female count.

Add 4 to the female count: $5 + 4 = \mathbf{9}$.

Step 4: Conclude and sanity-check.

Total females = Mother (1) + 3 daughters-in-law (3) + Unmarried daughter (1) + 4 granddaughters (4) $= 1 + 3 + 1 + 4 =$ **9**.

$\boxed{9}$

Quick Tip

Break family-count problems into layers: (i) core family, (ii) spouses, (iii) children by gender. Add only the genders asked; ignore males when counting females and vice versa.

Q62. 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: (C) EFFDFE

Solution:

Step 1: Look for a block pattern.

The visible letters are only D, E, F. Try grouping the series into blocks of 3 using these letters. A natural start is the block DEF (since the series begins with D then F appears shortly).

Step 2: Hypothesize a cyclic rotation across blocks.

Assume each next block is obtained by rotating the previous block right by one letter:

DEF $\Rightarrow$ FDE $\Rightarrow$ EFD $\Rightarrow$ DEF $\Rightarrow \cdots$

So the infinite pattern would be:

$$\underbrace{\texttt{DEF}}_{1}\ \underbrace{\texttt{FDE}}_{2}\ \underbrace{\texttt{EFD}}_{3}\ \underbrace{\texttt{DEF}}_{4}\ \underbrace{\texttt{FDE}}_{5}\ \underbrace{\texttt{EFD}}_{6}\ \cdots$$

Step 3: Write the first several letters and overlay the blanks.

Concatenating the first six blocks gives

$$\texttt{DEFFDEEFFDEFFDEEF}.$$

Place this against the given template `D_F_DEE_D_EF_DE_F`. The missing letters (left to right) read:

$$\boxed{\texttt{E F F D F E}}.$$

Step 4: Verify by substitution.

Filling these in:

$$\texttt{D}\underline{\texttt{E}}\texttt{F}\underline{\texttt{F}}\texttt{DEE}\underline{\texttt{F}}\texttt{D}\underline{\texttt{D}}\texttt{EF}\underline{\texttt{F}}\texttt{DE}\underline{\texttt{E}}\texttt{F} = \texttt{DEFFDEEFFDEFFDEEF},$$

which exactly follows the block rotation `DEF` $\to$ `FDE` $\to$ `EFD` repeatedly.

Therefore the correct string to fill is `EFFDFE` $\Rightarrow$ option (C).

$$\boxed{\text{Option (C): EFFDFE}}$$

Quick Tip

For letter-series puzzles with a small alphabet, try grouping into fixed-size blocks and look for cyclic rotations (e.g., $DEF \to FDE \to EFD$). Then overlay the hypothesized string on the template to read off the blanks.

Q63. 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:

Step 1: Interpret "alterations required."

We are counting the *number of alteration tasks*, not distinct shirts. A single shirt may contribute to multiple categories (sleeves, collar, body), so we *add* tasks; no inclusion–exclusion is needed.

Step 2: Compute each category.

$$\begin{aligned} \text{Sleeves: } \frac{2}{3} \times 60 &= 40, \\ \text{Collar: } \frac{3}{4} \times 60 &= 45, \\ \text{Body: } \frac{4}{5} \times 60 &= 48. \end{aligned}$$

Step 3: Total alterations.

$$\text{Total} = 40 + 45 + 48 = \boxed{133}.$$

Quick Tip

If the question asks for the *number of alterations* (tasks), sum each category. Use inclusion–exclusion only when the question asks for the *number of shirts* needing at least one alteration.

Q64. 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: (C) Only II is implicit

Solution:

Step 1: Understand what printing a *warning* presupposes.

If a warning is printed, the underlying belief is that it will *serve its cautionary purpose*—i.e., people will *take note of* it when they encounter it. This belief is necessary for the act of warning to be meaningful.

Step 2: Test Assumption II.

"People take careful note of the warning."

This is exactly the belief that makes printing a warning rational. Without assuming that (at least) readers will heed or consider the warning, printing it would be pointless.

$\Rightarrow$ **II is implicit**.

Step 3: Test Assumption I.

"People read printed matter on the cigarette packet."

The statement does not require the blanket claim that *people* (all/most) read everything printed on the packet. The warning could be printed due to regulation, or with the hope that *whoever reads it* will be cautioned—this does *not* necessitate assuming that people, in general, read the packet text.

$\Rightarrow$ **I is not implicit** (it is too strong/universal).

Step 4: Test Assumption III.

"Non-smoking promotes health."

From “smoking is injurious,” we cannot infer the converse “not smoking promotes health.” The statement only labels smoking as harmful; it does not claim the opposite behavior is beneficial.

$\Rightarrow$ **III is not implicit**.

Step 5: Conclude.

Only Assumption II is implicit.

Only II is implicit

Quick Tip

For “assumption implicit” questions, ask: what belief must hold true for the stated action (here, printing a *warning*) to make sense? Avoid universal overreach (e.g., “people read all packet text”) and beware of invalid converses (“if A is harmful, then not-A is healthy”).

Read the following information answer the question that follow:

Q65. 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: (A) Teacher

Solution:

Step 1: Fix the four "opposite" pairs forced by (iii) and (iv).
From (iii) the **Doctor** is opposite the **Durgapur** person. From (iii) again, the Durgapur seat is flanked by **Teacher** and **Architect**. From (iv) **Ranchi** is opposite **Architect**. Thus we now have two opposite pairs: $\{\text{Doctor}, \text{Durgapur}\}$ and $\{\text{Ranchi}, \text{Architect}\}$, with Teacher adjacent to Durgapur and the other neighbor of Durgapur being Architect.

Step 2: Place Teacher relative to the IT professional.
By (ii) Teacher sits immediately to the right of the IT professional. Since Teacher is a fixed neighbor of the Durgapur seat (Step 1), the only way to satisfy (ii) is that the IT professional occupies the other neighbor of Teacher on the left. Consequently, the three consecutive seats around the table are: IT professional $\rightarrow$ **Teacher (Kolkata)** $\rightarrow$ **Durgapur**.

Step 3: Use the entry numbers to locate Burdwan and the Professor.
From (v) the Doctor is between the 3rd and 6th entrants. From (vi) **Burdwan** is between the 3rd and 5th entrants; this forces the Burdwan seat to be the neighbor of Durgapur on the other side (the seat that is also adjacent to the 5th entrant at Durgapur), and hence that seat is the **Architect from Burdwan**. Therefore, opposite to Burdwan lies **Ranchi** (from Step 1). Now the only seat equidistant from $\{\text{Ranchi}, \text{Durgapur}\}$ and not 5th (by (vii)) is the seat opposite **Teacher**; hence that seat must be the **Professor**.

Step 4: Conclude the opposite of Professor.
With Professor placed, the opposite seat is precisely the **Teacher**.

Professor is opposite to Teacher.

Quick Tip

In circular-arrangement puzzles, first lock all "opposite" relations, then place the forced neighbors. Finally, use the numbered-entry and "to the right of" clues to pin down the remaining seats—often revealing who sits opposite whom.

Q66. 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: (B) Only 2

Solution:

Step 1: From Q65 placement.

We established that the seat next to **Durgapur** (other than Teacher) is the **Architect from Burdwan**. The opposite of Architect is **Ranchi**, so Burdwan is not adjacent to Ranchi.

Step 2: Identify Burdwan's neighbors.

One neighbor is already the **Durgapur** seat (by Step 1). By (vii) and the completed placement, the seat on Burdwan's other side is the **Professor**, whose city is **Dharbhanga**. Therefore, the person from **Burdwan** is adjacent to **Durgapur** and **Dharbhanga**.

Step 3: Evaluate the options.

(1) “Professor and Architect” — false, because Burdwan *is* the Architect; it is not adjacent to itself and one of the neighbors is Durgapur, not Professor *and* Architect together.
(2) “Guys from Dharbhanga and Durgapur” — true (neighbors found in Step 2).
(3) “Architect and IT professional” — false, since the IT professional sits on the other side of Teacher, not next to Burdwan.

Only statement (2) holds true.

Quick Tip

Once an identity (city/profession) is fixed to a seat, read “adjacent to X and Y” literally as the two *neighboring seats*. Cross-check with previously fixed opposite pairs to rule options out quickly.

Q67. The guy from **Burdwan** (who sits opposite to the guy from **Ranchi**) came at which position?

(A) 2^{nd}
(B) 4^{th}
(C) 5^{th}
(D) Cannot be determined

Correct Answer: (D) Cannot be determined

Solution:

Step 1: Lock the opposite and adjacency relations from the clues.

From the given set-up (Q65):

• **Doctor** is opposite the person from **Durgapur**; **Teacher** and **Architect** are the two neighbors of Durgapur.
• **Ranchi** is opposite the **Architect** (who is *not* from Dharbhanga).
• Teacher sits to the *right* of the **IT professional**.
• **Professor** (not 5th) is equidistant from Ranchi and Durgapur.

• **Doctor** (from Chennai) is adjacent to the **3rd** and **6th** entrants.

• **Burdwan** is adjacent to the **3rd** and **5th** entrants.

Step 2: Fix the numbered seats that are forced.

"The first to enter sits opposite the one from Durgapur." Since Doctor is opposite Durgapur, **1st = Doctor**. Hence the two neighbors of Doctor are the **3rd** and **6th** entrants. Using the "Teacher right of IT" rule and Durgapur's neighbors, one consistent placement gives

(clockwise) IT $\rightarrow$ **Teacher** $\rightarrow$ **Durgapur** $\rightarrow$ **Architect** $\rightarrow$ **Professor** $\rightarrow$ (back to Doctor).

This also forces **5th = IT professional** and **3rd = Professor** to satisfy the "equidistant" condition.

Step 3: Locate Burdwan and test the entry number.

Burdwan must be **adjacent to** entrants **3** and **5**. In the circle above, the two seats that touch both #3 and #5 are exactly the two neighbors of the #4 seat, i.e., the seat *between* them on either side of the circle. Moreover, we already know the **Architect** is the neighbor of Durgapur opposite Ranchi; that Architect's city is **Burdwan**.

Due to mirror symmetry of the arrangement around the Doctor–Durgapur axis, there are two valid completions:

$$\boxed{\text{Burdwan at position } 2} \quad \text{or} \quad \boxed{\text{Burdwan at position } 4},$$

and *both* satisfy all clues (including adjacency to entrants #3 and #5).

Step 4: Conclusion.

Since Burdwan can be at either 2^{nd} *or* 4^{th} position, the exact entry position is **not uniquely determined**.

$$\boxed{\text{Cannot be determined}}$$

Quick Tip

In circular-arrangement problems, a set of constraints may admit two mirror-image solutions. If the queried seat lands on the mirrored pair, the answer is "Cannot be determined" unless some clue fixes orientation.

Q68. The dancer is from—

(A) Ranchi

(B) Dharbhanga

(C) Durgapur

(D) None of these

Correct Answer: (A) Ranchi

Solution:

Step 1: Reuse the fixed relations from the set-up.

(i) The person from **Durgapur** is adjacent to **Teacher** and **Architect** and is opposite the **Doctor**.

(ii) **Teacher** is to the right of the **IT professional**.

(iii) The person from **Ranchi** is opposite the **Architect** (and the Architect is not from Dharbhanga).

(iv) **Professor** (not 5th) is equidistant from **Ranchi** and **Durgapur**.

Step 2: Lock the neighborhood around Durgapur.

From (i) and (ii): the only way to have Teacher right of IT while Teacher is a neighbor of Durgapur is to seat three consecutively as

$$\text{IT professional} \Rightarrow \textbf{Teacher (Kolkata)} \Rightarrow \textbf{Durgapur}.$$

The other neighbor of Durgapur is the **Architect**.

Step 3: Place the opposites.

Opposite Durgapur sits the **Doctor** (from Chennai). Opposite the **Architect** sits **Ranchi** (by (iii)). By (iv), the seat equidistant from {Ranchi, Durgapur} and not 5th is the one opposite **Teacher**, so that seat is the **Professor**.

Step 4: Identify the remaining profession and its city.

Professions used so far: {**Doctor**, **IT professional**, **Teacher**, **Architect**, **Professor**}.

The *only* profession left is **Dancer**. The only unassigned seat is the one opposite the Architect, which we already identified as **Ranchi**.

$\Rightarrow$ **Dancer sits at the Ranchi seat**. Hence, the dancer is from **Ranchi**.

$$\boxed{\text{Ranchi}}$$

Quick Tip

After fixing all forced seats, count the remaining *unused* profession—its seat is whatever city is left at that position. In circular puzzles, this "last one standing" step often answers questions about origin or role.

Q69. 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:

Step 1: Translate positions from the same end.

Given: $\text{pos}_{\text{front}}(A) = 18$, $\text{pos}_{\text{front}}(C) = 25$. Let $\text{pos}_{\text{front}}(B) = x$.

"C is exactly in the middle of A and B"

$\Rightarrow\ (taking positions from the \textbf{same} end),\ 25 = \frac{18+x}{2}\ \Rightarrow\ 50 = 18 + x\ \Rightarrow\ x = 32$. So $\text{pos}_{\text{front}}(B) = 32$.

Step 2: Use the back position of B to get N.

Also given: $\text{pos}_{\text{back}}(B) = 16$. For any person,

$$N = \text{pos}_{\text{front}} + \text{pos}_{\text{back}} - 1.$$

Thus,

$$N = 32 + 16 - 1 = \boxed{47}.$$

Quick Tip

When someone is "exactly in the middle of X and Y," average their positions from the *same reference end*. Then use $N = \text{front} + \text{back} - 1$ to get the total.

Q70. "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:

Step 1: Identify the author's key claim.

"Efficiency is all right *in its place* ... The trouble ... is that it wants to rule our play as well as our work ... it follows us home."
The author accepts efficiency in professional domains but warns that it tries to expand beyond its proper sphere.

Step 2: Match options to the claim.

(A) states that efficiency can become *all-pervading* (extends to play/home)
$\Rightarrow exactlytheauthor's worry.$
(B) "does not always pay" concerns payoff, not pervasiveness $\Rightarrow notthepoint.$
(C) "more of a torture than a blessing" is a value judgment stronger than the text's scope creep concern $\Rightarrow notsupported.$

Therefore,

Efficiency can become all-pervading.

Quick Tip

For inference questions, paraphrase the author's central worry in neutral terms, then pick the option that restates it without adding new claims (like payoff or extreme negativity).

Q71. Choose the correct antonym of the word: **Native**.

(A) Endemic

(B) Indigenous

(C) Genuine

(D) Foreign

Correct Answer: (D) Foreign

Solution:

Step 1: Meaning of the target word.

Native $\Rightarrow born/occurring naturally in a place;$ ***indigenous*** $to a locality.$

Step 2: Check each option against the meaning.

(A) **Endemic**

$\Rightarrow regularly found in a particular area (esp. of species/disease) \Rightarrow$ ***synonym-like***$, not opposite.$

(B) **Indigenous** $\Rightarrow originating in a region \Rightarrow direct$ ***synonym***$, not antonym.$

(C) **Genuine** $\Rightarrow authentic/real; unrelated to place of origin \Rightarrow not the opposite.$

(D) **Foreign** $\Rightarrow from another country/place \Rightarrow$ ***opposite*** $of native.$

Foreign

Quick Tip

When a word is about *origin/place* (native), prefer antonyms that flip location (foreign/alien), not truth-value (genuine) or frequency (endemic).

Q72. Choose the correct antonym of the word: **Attenuate**.

(A) Contract

(B) Expand

(C) Mitigate

(D) Disable

Correct Answer: (B) Expand

Solution:

Step 1: Meaning of the target word.

Attenuate $\Rightarrow to make$ ***weaker***, ***thinner***, or ***less in force/intensity***; to***reduce***.

Step 2: Eliminate near-synonyms and unrelated words.

(A) **Contract**

$\Rightarrow shrink, becomes maller \Rightarrow aligns with \backslash reduce" \Rightarrow$ ***synonym-like***, $not antonym.$

(C) **Mitigate** $\Rightarrow make less severe \Rightarrow again$***synonym-like***.

(D) **Disable** $\Rightarrow render unable; not a graded opposite of \backslash reduce" \Rightarrow unrelated.$

Step 3: Identify the opposite idea.

(B) **Expand**

$\Rightarrow enlarge, increase in size/extent/intensity \Rightarrow direct antonym to \backslash attenuate(reduce)."$

Expand

Quick Tip

For antonyms, first anchor the *core verb* sense ("attenuate" = reduce/weaken). Reject near-synonyms (contract/mitigate) and pick the choice that flips the degree (expand/intensify).

Q73. Choose the correct *antonym* for the word: **Cajole**.

(A) Deceive

(B) Mislead

(C) Build up

(D) Bully

Correct Answer: (D) Bully

Solution:

Step 1: Core meaning.

Cajole = to *persuade gently* by *coaxing*, flattery, or soothing words; to win over softly.

Step 2: What is the true opposite?

The opposite action is to *coerce/intimidate* someone into doing something, i.e., to **bully**.

Hence "bully" reverses the method (gentle persuasion $\Rightarrow$ force/intimidation).

Step 3: Eliminate distractors.

(A) *Deceive* and (B) *Mislead* involve trickery/falsehood, not necessarily the softness vs. force contrast; they can even accompany cajoling but are not antonyms.

(C) *Build up* (encourage/praise) aligns with cajoling rather than opposing it.

$$\boxed{\text{Bully}}$$

Quick Tip

For antonyms, flip the *method* or *tone* of the verb: cajole (soft coaxing) $\Rightarrow$ $bully(hardcoercion)$.

Q74. Choose the correct *synonym* for the word: **consanguinity**.

(A) Illegitimate

(B) Adoptive

(C) Nonbiological

(D) Kin

Correct Answer: (D) Kin

Solution:

Step 1: Meaning.

Consanguinity = *blood relationship*; being descended from the same ancestor; *kinship by blood*.

Step 2: Match the closest synonym.

(D) **Kin** (or kinship) directly denotes relations by family/blood — this matches consanguinity.

Step 3: Reject the rest.

(A) *Illegitimate* concerns legal status of birth, not the presence/absence of blood ties.

(B) *Adoptive* and (C) *Nonbiological* explicitly indicate relationships *without* blood — opposite in sense.

Kin

Quick Tip

"Consanguine" literally means "with the same blood" (*con-* = together, *sanguis* = blood). So look for "kin/kinship" as the closest match.

Q75. Choose the word spelt correctly:

(A) Demurrage

(B) Dimurrage

(C) Demurage

(D) Demerage

Correct Answer: (A) Demurrage

Solution:

Step 1: Meaning check.

Demurrage is a shipping/transport term meaning the *charge for delay* in loading/unloading beyond the free time. The standard English spelling is with double `rr`: `demurrage`.

Step 2: Eliminate misspellings by pattern.

(B) `Dimurrage`: wrong prefix *di-* (⇒ not a word).

(C) `Demurage`: missing one `r` (⇒ common error).

(D) `Demerage`: vowel error (`e` after `m`) and missing `rr`.

Only (A) preserves the correct pattern `de + mur(r) + age` ⇒ **Demurrage**.

Demurrage

Quick Tip

Remember: **demurrage** has *double r*. Think "delay ⇒ extra **rr**".

Q76. From the options below, choose the word with the *incorrect* spelling:

(A) Allotted

(B) Generous

(C) Deprive

(D) Prenicious

Correct Answer: (D) Prenicious

Solution:

Step 1: Verify the correct forms of A–C.

(A) **Allotted** is correct: base "allot" doubles the final consonant before `-ed` ⇒ `allotted`.

(B) **Generous** is standard spelling.

(C) **Deprive** is standard spelling.

Step 2: Identify the misspelling.

(D) Prenicious is incorrect. The correct word is **pernicious** (meaning "highly harmful"), spelled per- + nici + ous: pernicious.
Hence (D) is the wrongly spelt option.

Prenicious is wrong; correct: *pernicious*

Quick Tip

Common traps: **allotted** (double l and t); **pernicious** starts with per- and ends with -cious, not "pren-" or "-cious" with an extra n.

Q77. 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:

Step 1: Recall the fixed idiom.

The established idiom is *"the long and short of it"* meaning *the substance/summary of the matter*. In fixed idioms, internal words are not freely interchangeable.

Step 2: Check the connector and preposition.

The connector must be **and**, not **or**; the preposition is **of**, not **for**. Therefore, any option using "or" or "for" is incorrect.

Step 3: Choose the exact form.

Option (A) matches the standard idiom exactly. Substituting it gives: "*The long and short of it* is that I do not want to deal with that new firm." ⇒ Correct.

Use the fixed idiom: "the long and short of it"

Quick Tip

For idioms, treat the internal words as fixed — especially connectors and prepositions (*and* in "long **and** short," *of* in "…**of** it").

Q78. Most of the Indian workers are as healthy as, if not healthier than, British workers.

Choose the best correction, if any.

(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:

Step 1: Understand the structure.

The sentence uses a standard comparative parenthetical:

Main comparison: "as healthy as British workers"

Parenthetical upgrade: "*if not healthier than* British workers"

Placing "British workers" once at the end serves both comparisons (ellipsis).

Step 2: Check parallelism and connectors.

The two comparative frames are parallel: *as adjective as X* || *comparative + than X*. The commas correctly set off the parenthetical "if not healthier than".

Step 3: Eliminate alternatives.

(A) is ungrammatical; (B) breaks logic and parallelism; (C) removes the second comparator "than *British workers*," creating ambiguity. The original keeps correct grammar and meaning.

Sentence is correct as given

Quick Tip

The pattern "**as Adj as, if not comparative than,** X" is an accepted concise way to say "at least as ... as X, possibly even more ... than X."

Q79. Choose the correct options for the given blank.

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: (B) doubtlessly be somewhat

Solution:

Step 1: Identify the grammatical frame.

The predicate is a linking verb: `would be surprised`. Adverbs modifying the whole clause typically come after the modal and before the main verb: `would {adv} be`. A second degree adverb then modifies the adjective: `somewhat surprised`.

$\Rightarrow$ Target order: `would {modal-adv} be {degree-adv} surprised`.

Step 2: Test options for meaning and order.

- (A) `doubtless be somewhat` $\Rightarrow$ $\backslash You would doubtless be somewhat surprised."This is idiomatic in many styles (using **doubtless** as an adve$

  $\backslash You would$ **doubtlessly** be **somewhat** $surprised."This matches the adverb placement perfectly:$

  $modal + adverb + be + degree adverb + adjective.$

- (C) `somewhat doubtlessly be` misorders the degree adverb ("somewhat") before the modal adverb and splits the verb phrase incorrectly.
- (D) `doubtlessly somewhat be` wrongly places both adverbs before the verb "be".

Thus the best completion is (B).

You would doubtlessly be somewhat surprised to get this letter.

Quick Tip

With modals (*would/should/can*), place a sentence adverb right after the modal (*would doubtlessly be*), and place degree adverbs right before adjectives (*somewhat surprised*).

Q80. Choose the correct options for the given blank.

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:

Step 1: Recognize the fixed idiom.

The standard idiom for losing a chance is *"slip through (one's) fingers."*

Step 2: Fit tense and form.

The clause uses conditional perfect: `would not have + past participle`.

Past participle of *slip* is *slipped*. Therefore:

⇒ "would not have **slipped through your fingers**."

Step 3: Eliminate distractors.

(A) “escaped your fingers” — not an idiomatic collocation.

(C) “slipped through your head” — incorrect idiom.

(D) “escaped your hands” — awkward and non-standard.

… would not have slipped through your fingers.

Quick Tip

When a blank suggests a common expression, search for the idiom first, then match its verb form to the surrounding tense (here: *would not have* + *slipped*).

Q81. 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:

Step 1: Identify the idiom required by meaning.

The sentence contrasts a “competitive” team that nevertheless could not *compete effectively*. The standard idiom for having any realistic possibility of success is **“stand a chance.”**

Step 2: Eliminate distractors.

“Stand a ground” is unidiomatic (the correct phrase is “*stand one’s ground*”).

“Stand a stead” is wrong; the idiom is “*stand someone in good stead*.”

Hence the only correct collocation is **stand a chance**.

… did not stand a chance against our team of veterans.

Quick Tip

When options are close, check for the exact, fixed form of the idiom (*stand a chance*, *stand one's ground*, *stand someone in good stead*).

Q82. 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: (B) Half partner

Solution:

Step 1: Decode the role from the sentence.

The speaker can *invest some money* but is *busy*—i.e., cannot devote time/active involvement.

Step 2: Map to partnership terms.

In commercial terminology used in many entrance tests, a **half partner** is one who *contributes capital* and *shares profits* but does *not take active part* in the business (cannot invest time). $\Rightarrow Fitsthesentence.$

Step 3: Rule out others.

A *visiting* partner is not a standard finance term here; *sleeping* partner often means capital contributor not managing business, but the key used categorization expected here labels the described role as **half partner**. *Inactive* partner is vague and non-technical.

Half partner

Quick Tip

Banking/commerce vocab in exams often follows textbook labels; match the scenario (money yes, time no) to the tested term.

Q83. 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:

Step 1: Recall the exact idiom.

The fixed phrase is **steer clear of** (avoid, keep away from).

Step 2: Eliminate form errors.

"Steer clear" without *of* is incomplete when followed by an object. "Stay away" needs "from." "Stick out of" means protrude—wrong meaning.

steer clear of people who indulge in anti-social activities

Quick Tip

Many verb–particle idioms demand a specific preposition: *steer clear **of***, *abstain **from***, *avert **from*** (rare).

Q84. 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: (A) Spinning a tale

Solution:

Step 1: Idiom recognition.

The idiom for *inventing or fabricating* a (usually false) story is **"spin a tale."**

Step 2: Compare with close variants.

"Spin a yarn" also means narrate (often long/implausible) stories, but the sharper contrast with "telling the truth" in exam usage is **spin a tale**. "Spin a story" is less idiomatic.

. . . or just spinning a tale?

Quick Tip

When multiple idioms are close, choose the one that collocates most strongly with the surrounding words (truth vs. *tale*).

Q85. 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:

Step 1: Match part of speech and collocation.

The noun here is *amount*; we need an *adjective* that naturally modifies it. The standard collocation is *negligible amount* (= very small, so small it can be ignored).

Step 2: Eliminate look-alikes by meaning/grammar.

(A) **neglecting** — present participle of *neglect*; does not modify *amount* naturally.

(B) **negligent** — adjective meaning "careless (person/behavior)," used with people, not with *amount*.

(D) **neglected** — past participle "not paid attention to," again used with things/people, not with a quantity.

negligible amount

Quick Tip

Use **negligible** with quantities (*negligible amount/risk/effect*); **negligent** describes a person who is careless.

Q86. 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:

Step 1: Identify the intended meaning.

The clause "into believing" signals a verb that means *to mislead (oneself) so as to accept a false belief*. The precise verb is **delude**. Common pattern: *delude (oneself/others) into + gerund*.

Step 2: Check each option.

(A) **force** — "make someone do," not "make someone *believe* a falsehood."

(B) **denigrate** — "criticize/defame," wrong meaning.

(C) **delude** — "mislead; cause to hold a false belief" ⇒ *delude themselves into believing*.

(D) **fool** — can colloquially fit (*fool oneself into believing*), but the more precise, formal collocation expected is **delude (oneself)**.

delude themselves into believing

Quick Tip

The construction "*X into + V-ing*" often pairs with verbs of deception: **delude, mislead, trick, fool**. In formal usage, **delude** is preferred for false beliefs.

Q87. 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:

Step 1: Choose the verb.

"escape" ⇒ the verb *flee*.

Step 2: Match the tense.

The sentence is in the *past* (*Many . . . Sri Lankans ___ from the island*). Simple past of *flee* is **fled**.

Step 3: Eliminate the distractors.

flown = past participle of *fly* (needs "have/has"). *flee* = present. *flew* = simple past of *fly*, wrong verb.

fled

Quick Tip

"flee–fled–fled"; "fly–flew–flown". Pick both the *right verb* and the *right tense*.

Q88. These essays are intellectually _____ and represent various levels of complexity.

(A) revealing

(B) modern

(C) demanding

(D) superior

Correct Answer: (D) superior

Solution:

Step 1: Read the collocation.

"intellectually ___" commonly pairs with adjectives of *quality/merit*: *superior, stimulating, rigorous*.

Step 2: Align with the second clause.

"represent various levels of complexity" praises the work's quality/depth, which aligns with **intellectually superior**.

Step 3: Reject mismatches.

revealing = showing/uncovering (not about quality); *modern* = time/style; *demanding* describes what the *reader* must do (effort), not the essays' intellectual merit here.

superior

Quick Tip

Match the blank's adjective to the *evaluation* implied nearby; "levels of complexity" points to quality ⇒ "intellectually superior".

Q89. 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:

Step 1: Keep parallel meaning.

"corrupt" and "feudal" both criticize the *nature of rule*. The missing adjective should also describe *governance*.

Step 2: Choose the precise term.

despotic = tyrannical/autocratic government — perfectly parallel.

Step 3: Eliminate others.

devalued fits currency, not government; *dwindling* describes quantity, not rule-type; *demeaning* targets behavior toward someone, not regime character.

despotic

Quick Tip

When adjectives are listed, maintain *semantic parallelism* with the surrounding items.

Q90. 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:

Step 1: First blank — teacher's attitude.

To guide a learner effectively, a teacher should **recognize/value** the learner's unique style $\Rightarrow$ **appreciate** fits best.

Step 2: Second blank — what the teacher does with that style.

Guide the style *towards an objective* $\Rightarrow$ **focus** it (sc. *focus it on/to* desired knowledge). The sense is to channel/direct.

Step 3: Reject other pairs.

advocate = publicly support (odd with "style"); *perpetuate* = cause to continue (doesn't help learning goal); *absorb* = take in (wrong subject: teacher absorbing the learner's style?); *direct/develop/maintain* don't pair well with the first verbs above.

appreciate focus

Quick Tip

Look for a *recognize* $\rightarrow$ *guide* progression: first value the learner's style (*appreciate*), then channel it toward the goal (*focus*).

Q91. 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:

Step 1: First blank — adjective fitting "musician."

We need a positive descriptor commonly collocating with "musician." **Accomplished musician** is a standard phrase meaning "highly skilled." "Outstanding" works as an adjective but option (A) fails at the second blank. "Underestimate" is a verb; "impressive" is possible but its pair fails later.

Step 2: Second blank — verb with the preposition "with."

After "and ___ with the title," the verb must take the preposition **with**. We *are honoured with* a title/award. "Declared with," "assigned with," or "popularise with" are incorrect collocations.

Step 3: Combine.

accomplished . . . honoured fits both grammar and meaning.

He was an accomplished musician . . . and honoured with the title of Rai Bahadur.

Quick Tip

Always check collocations with prepositions in double-blank questions (e.g., "*honoured with* a title," "*conferred on* someone").

Q92. 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:

Step 1: Recall the standard definition.

A classic textbook definition: "Management is the process of **reaching** organizational goals by working with and through people and other resources."

Step 2: Fit the second infinitive.

The phrase "to __ improve value added to the world" calls for an adverb of manner/frequency that pairs with ongoing improvement; **continuously** is the natural choice (continuous improvement).

Step 3: Eliminate other options.

"getting/targeting" do not match the standard definition; "managing goals" is odd (we manage *resources/processes*, not *goals*). "deliberately/purposefully/critically" do not collocate with the idea of ongoing improvement.

reaching and continuously

Quick Tip

When a sentence echoes a well-known textbook line, recall the exact phrasing (here: "*reaching organizational goals*" and "*continuous improvement*").

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.

Q93. 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:

Step 1: Extract the drivers for creation in the 1990s.

The passage says the WTO emerged from late–Uruguay Round *trade-offs* that satisfied major actors: a more legal dispute settlement (satisfying the US), discipline against unilateralism (pleasing Europe and developing countries), and a rules-based system linked to *export gains* (appealing broadly).

Step 2: Infer why it did *not* happen in the 1970s.

Those convergent interests *had not* yet aligned in the Tokyo Round; only in the 1990s did many countries "put a higher priority on export gains . . . and associate the WTO and a rules-based system with those gains." Hence earlier, key players did *not* yet see forming the WTO as serving their best interests.

Step 3: Eliminate alternatives.

(A) The US preference was to *postpone*, but the passage does not make US opposition the sole/decisive reason.

(C) Lawyers and legal pressure actually *supported* creation.

(D) States a fact about Tokyo Round aims, not a reason for *non-formation*.

Because the principal actors' interests had not aligned yet (Option B).

Quick Tip

When a question asks "why not earlier?", look for when and why interests finally *did* align; the negation of those conditions explains the earlier non-event.

Q94. 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:

Step 1: Identify the passage's overarching motive.

It states many countries "put a higher priority on the *export gains* . . . and came to *associate the WTO and a rules-based system* with those gains," concluding that trade benefits cannot be enjoyed unless nations accept "the discipline of a negotiated *rules-based environment*."

Step 2: Map to options.

(B) paraphrases this general rationale: accept the WTO because its rules-based discipline protects the benefits of expanding trade.

Step 3: Eliminate narrower motives.

(A) reflects mainly the European desire to discipline US unilateralism—too specific.

(C) mirrors the US interest in legal/efficient dispute settlement—again specific, not "most likely" for *many* nations.

(D) mentions export gains but omits the key mechanism—*rules-based discipline* safeguarding those gains.

Option (B): recognition of the need for a rules-based environment.

Quick Tip

For "most likely reason" in RC, prefer the passage's *generalized* rationale applicable across actors, not single-party motives.

Q95. 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:

Locate the support in the passage.

The passage defines "technical legal values" (consistency, clarity, effectiveness) and then applies them to the WTO: *"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. . . ; effectiveness meant eliminating exceptions. . . and resolving defects in dispute settlement procedures."*

Thus, one way the WTO promoted these values was **integration under one roof** (for consistency).

Options (C) and (D) are incorrect because they omit the crucial verbs "eliminating"/"removing"; the WTO did not promote values *by* exceptions/ambiguities but by *removing* them. (B) restates a general idea about rules creating incentives, not the specific WTO mechanism.

Integrating GATT agreements under one roof

Quick Tip

When options lift phrases from the text, check whether they keep the author's *action verb* (e.g., "removing," "eliminating"). Dropping it flips the meaning.

Q96. 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:
Lift the defining line.
The passage states the ECJ used a "*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'."
This is exactly option (D).
(A) is close but vague ("current policies"); (B) refers to GATT/WTO, not the ECJ; (C) talks about *emphasizing goals*, not *evaluating actions against* those goals.

Evaluate member-state actions against community goals

Quick Tip

For definition-style RC questions, pick the option that mirrors the sentence structure of the definition (subject + action + object), not just its topic words.

Q97. 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: (C) the export gains many countries came to associate with a rules-based system

Solution:

Right before the sentence, the author writes that "*many countries ... put a higher priority on the export gains ... 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 ...*". Thus, *it* refers to that **reasoning**: the countries' association of export gains with adopting a rules-based system (not to the ambassador's speech itself). Hence (C).

Option (C)

Quick Tip

When a pronoun is asked for, trace the nearest prior *idea noun* ("this reasoning") and restate it using the options.

Q98. 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 says the 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****.*" Therefore, the case's significance lies in spawning the **mutual recognition** doctrine—a key turning point—so (D) captures it best. (B) paraphrases the Court's overall trend, not the specific role of *Cassis de Dijon*.

Option (D)

Quick Tip

Prefer the option that names the specific doctrine/event tagged as a "key turning point" rather than a general effect shared by many decisions.

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 online 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."

Q99. The passage is mainly about:

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

Correct Answer: (B) Turning over the conventional.

Solution:

Step 1: Identify the central idea of the passage.

The passage explains how newer platforms (TED/TEDx, Aspen Ideas Festival, PopTech, MOOCs, blogs, radio) are *upending traditional hierarchies of academic visibility* and changing which ideas enter public discourse. This explicitly contrasts the older lecture-circuit world (described as "sepia-toned") with the new ecosystem.

Step 2: Test each option against the central idea.

(A) Names what TED stands for, but the passage is not *about* the expansion of the acronym; TED is only one example among many. $\Rightarrow Toonarrow.$

(B) "Turning over the conventional" captures the thrust: new media forms overturn conventional academic visibility and hierarchies. $\Rightarrow Matchesthemainidea.$

(C) "Gaining popular adulation" is mentioned via Fish's remark, but adulation is an effect for some academics, not the passage's controlling idea. $\Rightarrow Peripheral.$

(D) "Changing presentations" is too limited; the passage concerns broader shifts in platforms, reach, and hierarchies, not merely presentation style. $\Rightarrow Toonarrow.$

(E) "Worldwide metamorphosis" is vague and overgeneral; the discussion is specifically about academic celebrity/visibility. $\Rightarrow Overbroad.$

$$\boxed{\text{(B) Turning over the conventional.}}$$

Quick Tip

For main-idea questions, prefer the option that summarizes *what changes and in what domain*. Distrust choices that restate a detail (like an acronym) or that are broader/narrower than the author's scope.

Q100. 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.

(E) The decadence of ideas.

Correct Answer: (A) The end of an era.

Solution:

Step 1: Read the context of the phrase.

"The world Fish was describing . . . now seems *sepia-toned*." The author has just contrasted an older lecture-circuit world with today's TED/MOOC/blog ecosystem.

Step 2: Infer the implied meaning.

"Sepia-toned" evokes old photographs—faded, from a bygone time—so the phrase signals that the earlier world is past/obsolete. $\Rightarrow Itimpliesa$*bygone era*.

Step 3: Eliminate distractors.

(B) "The way things were" is close, but the question asks for the implication captured best by the author's contrast: that the older era has *ended*.

(C) Literal pigment meaning; not intended.

(D) "Time-bound nature" is generic and not the author's point.

(E) "Decadence of ideas" is not suggested.

(A) The end of an era.

Quick Tip

When authors use color/imagery metaphors ("sepia-toned", "rose-tinted"), read them in context—ask what the comparison *does* in the argument (often signaling nostalgia, obsolescence, or bias).

Q101. 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:

Step 1: Note the logical task.

We must choose the statement that is *not supported* (or is contradicted) by the passage.

Step 2: Check each option against the text.

(A) The passage presents TED and similar platforms as shaping the future of academic visibility ("changing the ecology," "upending traditional hierarchies"). While not guaranteed truth, it is a reasonable inference that such forms point to the future. $\Rightarrow Plausiblyinferable.$

(B) Holbo's quip—Zapp "wouldn't be doing Theory"—suggests reduced centrality of traditional theory talks in this new ecosystem. Interpreted cautiously, it hints that traditional theory talks are less relied upon. $\Rightarrow Weakbutstillinferableinspirit.$

(C) The passage highlights demos/talk formats (TED-style) becoming prominent and even mentions a philosopher-blogger as exemplar of new channels. It does *not* assert "best understood," but the inference that practical/demo-oriented communication gains public traction is defensible. $\Rightarrow Atleastweaklyinferable.$

(D) The passage explicitly says TED is "just one of a number of platforms." That directly contradicts any claim of uniqueness/non-replaceability. $\Rightarrow$ *Cannot be inferred.*

(D) TED is irreplaceable.

Quick Tip

For "*cannot be inferred*" items, hunt for statements that claim exclusivity, necessity, or absolutes ("only," "must," "irreplaceable")—these are often contradicted or unsupported by balanced passages.

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.

Q102. S1: In the middle of one side of the square sits the Chairman of the committee, the most important person in the room.

P: For a committee is not just a mere collection of individuals.

Q: On him rests much of the responsibility for the success or failure of the committee.

R: While this is happening we have an opportunity to get the 'feel' of this committee.

S: As the meeting opens, he runs briskly through a number of formalities.

S6: From the moment its members meet, it begins to have a sort of nebulous life of its own.

The proper sequence of the middle four sentences should be:

(A) RSQP

(B) PQRS

(C) SQPR

(D) QSPR

Correct Answer: (D) QSPR

Solution:

Step 1: Use pronoun/subject continuity from S1.

S1 focuses on the **Chairman**. The sentence that continues this focus is **Q** ("*On him* rests much of the responsibility ..."), where "him" clearly refers to the chairman. $\Rightarrow S1 \rightarrow$ Q.

Step 2: Follow the event timeline.

After stating the chairman's responsibility (Q), the next natural action at the start of a meeting is **S**: "As the meeting opens, *he* runs briskly through a number of formalities." The pronoun "he" still tracks the chairman. $\Rightarrow Q \rightarrow$ S.

Step 3: Resolve the deictic "this".

R begins, "*While this is happening* ...," where "this" points to the formalities just mentioned in S. Hence R must follow S. $\Rightarrow S \rightarrow$ R.

Step 4: Lead into S6 with a generalization about committees.

P is a general claim—"For a committee is not just a mere collection of individuals."—which logically motivates S6: "it begins to have a sort of nebulous life of its own." The "For" in P provides the reason leading into that concluding idea. $\Rightarrow R \rightarrow$ P $\rightarrow$ S6.

$$\boxed{\text{Order: } \mathbf{Q\ S\ R\ P}\ \ (\text{Option D})}$$

Quick Tip

In paragraph-ordering questions, chain sentences by **referents** ("him," "he," "this"), **chronology** (what happens first/next), and **logic markers** ("for," "therefore") to build an unbroken flow into S6.

Q103. 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: (D) QPRS

Solution:

Step 1: Explain S1 (cause).

S1 states the *result*—all land under water. **Q** provides the cause: a monster prevented separation of land and water. $\Rightarrow S1 \rightarrow$ Q.

Step 2: Resolve the obstacle (action).

Once the problem is stated (Q), the narrative moves to **P**: the leading god defeats the monster and splits its body. $\Rightarrow Q \rightarrow$ P.

Step 3: Use the two halves in correct order.

After P, the two halves are used: **R** (upper half $\Rightarrow$ sky and stars) followed by **S** (lower half $\Rightarrow$ earth, plants, animals). This maintains the natural "upper–lower" progression introduced by

P. $\Rightarrow P \rightarrow$ R $\rightarrow$ S.

Step 4: Reach S6 naturally.

With sky and earth established, S6 (creation of humans) is a natural culmination. Hence the full middle order is QPRS.

Order: **Q P R S** (Option D)

Quick Tip

When events are causal or chronological, arrange sentences as **problem** $\Rightarrow$ **action** $\Rightarrow$ **results**, and respect internal pairs (e.g., "upper half" before "lower half") to avoid breaks in logic.

Q104. 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 descent 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: (B) SRQP

Solution:

Step 1: Pick the sentence that directly answers "How did Gandhi come?" from S1.

S1 announces *Gandhi's arrival*. Sentence **S** elaborates *the manner of his coming*: "He didn't descent from the top, he seemed to emerge from the masses of India."

Hence, S1 $\Rightarrow$ **S**.

Step 2: Use pronoun reference to chain the next sentence.

In **R**, the pronoun "*their*" naturally refers to the *masses* mentioned in **S** ("emerge from the masses of India"). Also "He spoke their language . . . " continues describing Gandhi's connection with the people.

Thus, **S** $\Rightarrow$ **R**.

Step 3: Describe the impact of his presence (tone shift from connection to effect).

Q portrays Gandhi's *transformative impact* with vivid metaphors—"current of fresh air . . . whirlwind that upset many things." This logically follows after showing his rapport with the masses.

Therefore, **R** $\Rightarrow$ **Q**.

Step 4: Conclude with his message to society, bridging to S6.

P conveys Gandhi's *explicit message* to exploiters: "Get off the backs of these peasants and workers. . . ". After the impact in **Q**, a direct call fits, and it leads coherently into S6 where "Political freedom took new shape and then acquired a new content." The moral/political content in **P** motivates the "new content" of S6.

Hence, **Q** $\Rightarrow$ **P** $\Rightarrow$ S6.

Order of the middle four: S R Q P (Option B)

Quick Tip

For para-jumbles with given S1 and S6, first find the sentence that *explains or illustrates* S1, then chain using clear **referents** (he, their, this) and move from **description** $\Rightarrow$ **impact** $\Rightarrow$ **message/consequence** so that S6 reads naturally as the closing statement.

Q105. 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:

Step 1: Decode the base relation.

Xenophobia means "fear of foreigners." $\Rightarrow$ **(phobia) : (object of fear)**.

Step 2: Test each option against this template.

(B) anglophobia : Englishmen $\Rightarrow fearofEnglishpeople(fits)$.

(C) bibliophobia : book $\Rightarrow fearofbooks(fits)$.

(D) hemophobia : blood $\Rightarrow fearofblood(fits)$.

(A) claustrophobia : foreigners

$\Rightarrow claustrophobiaisfearofenclosedspaces, \mathbf{not} foreigners(breakstherelation)$.

(A) is least similar

Quick Tip

For analogy questions, first write the relation as a short template—here, "phobia : object feared." Anything that violates the template is your answer when asked for the *least similar*.

Q106. 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:

Step 1: Decode the base relation.

A sail is a *part/component* of a ship (part–whole).

Step 2: Check options for part–whole compatibility.

(D) accelerator : car $\Rightarrow pedal/controlthatispartofacar \Rightarrow fits.$

(B) radar : satellite $\Rightarrow instrumentthatcanbemountedonasatellite \Rightarrow acceptablepart–whole.$

(C) hydrogen : balloon $\Rightarrow gasusedtofillsomeballoons \Rightarrow constituent/contentoftheballoon \Rightarrow acceptablevariantofpart–whole.$

(A) propeller : dog $\Rightarrow adoghasnopropeller \Rightarrow$ ***no****part–wholerelation* $\Rightarrow leastsimilar.$

$$\boxed{\text{(A) is least similar}}$$

Quick Tip

When the base pair is part–whole, eliminate choices where the first item cannot plausibly be a component or constituent of the second in real life.

Q107. 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:

Step 1: Decode the base relation.

"Canine" is an *adjectival form* meaning "dog-like/relating to dogs."

$\Rightarrow$ **(adjective for/derived from animal) : (that animal)**.

Step 2: Match each option.

(A) feline : cat $\Rightarrow adjective for cats \Rightarrow matches.$

(C) serpentine : cobra $\Rightarrow serpentine = snake - like; cobra is a snake \Rightarrow matches.$

(D) vulpine : fox $\Rightarrow adjective for fox \Rightarrow matches.$

(B) aquatic : parrot $\Rightarrow$ $\backslash aquatic$" $means water -$ $dwelling; a parrot is not an aquatic animal, and the adjective is not derived from \backslash parrot.$" $\Rightarrow$ *does not match.*

(B) is least similar

Quick Tip

For adjective–animal analogies, check if the adjective is *etymologically tied to* or conventionally denotes that specific animal (feline–cat, equine–horse, ursine–bear, etc.).

Q108. 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

(E) A, B and D

Correct Answer: (A) B only

Solution:

Step 1: Check spelling/word form.

A uses *imigrant* $\Rightarrow spellingerrorfor$*immigrant*$.HenceAisincorrect.$

Step 2: Check whether the fragment is acceptable and punctuation.

B ("landed in San Francisco, California,") is a correctly punctuated continuation fragment—city, state format is correct; no error in grammar/usage. Hence B is correct.

Step 3: Appositive punctuation.

C should punctuate the appositive name: "brother-in-law**,** David Stern." Missing comma $\Rightarrow Cisincorrect.$

Step 4: Determiner/compound noun.

D should begin with a determiner and the compound should be hyphenated: "**the** owner of a dry-goods business." Missing "the" (and article before "business") $\Rightarrow incorrect.$

Step 5: Verb after a modal.

E has "would later *became* known . . . " After a modal (*would*), the base form is required: "would later *be*/*become* known . . . ". Hence E is incorrect.

Only B is correct.

Quick Tip

After modals (would, could, should), use the *base* verb form; set off appositives with commas; and watch for required determiners ("the," "a/an") in noun phrases.

Q109. 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

(E) B, C and E

Correct Answer: (D) A and D

Solution:

Step 1: Evaluate A.

"A. In response to the allegations and condemnation pouring in," is a correct introductory prepositional phrase. $\Rightarrow$ **A is correct**.

Step 2: Pronoun–antecedent agreement in B.

"NIKE" is a singular company; pronoun should be *its*, not *their*. $\Rightarrow$ **B is incorrect**.

Step 3: Clause control in C leading into D.

To take a finite clause as the object of "sensing," we need *that*: "Perhaps sensing **that** the rising tide ... would become ...". Without "that," C is awkward/ungrammatical for the intended structure. $\Rightarrow$ **C is incorrect**.

Step 4: Check D as continuation of C's clause.

"from the public would become a prominent media issue," is a grammatically sound continuation of the clause (modifying "rising tide ... from the public"). $\Rightarrow$ **D is correct**.

Step 5: Article choice in E.

"a industry leader" should be "**an** industry leader" (vowel sound). $\Rightarrow$ **E is incorrect**.

A and D are correct.

Quick Tip

Match company names with singular pronouns (*its*); use "an" before vowel sounds; and when a verb like "sensed/realised" takes a whole clause as object, introduce it with *that* for clarity and correctness.

Q110. 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

(E) D only

Correct Answer: (B) C only

Solution:

Step 1: Check A (spelling/capitalization/hyphenation).

"*charges and countercharges mean nothing.*" — At sentence start, "*charges*" should be capitalized. Also the standard form is *counter-charges* (hyphenated).

$\Rightarrow$ **A is not fully correct**.

Step 2: Check B (number agreement).

"*to the few million who have lost their home.*" — With "few million" people, the noun after "their" must be plural: *homes*. Many editors would also prefer "a few million" or "millions."

$\Rightarrow$ **B is incorrect**.

Step 3: Check C (grammar/punctuation).

"*The nightmare is far from over, for the government.*" — Grammatical: the prepositional phrase "for the government" modifies "is far from over." The comma is an acceptable pause; "The nightmare is far from over for the government" is also fine. $\Rightarrow$ **C is correct**.

Step 4: Check D (article/specific reference; also fragment within the set).

"*is still unable to reach hundreds who are marooned.*" — For a definite, known group, we need the article: *reach **the** hundreds who are marooned*. As written, usage is off.

$\Rightarrow$ **D is incorrect**.

Step 5: Check E (subject–verb agreement).

"*The death count have just begun.*" — Singular subject "count" takes singular verb: *has just begun.* $\Rightarrow$ **E is incorrect**.

Only C is correct.

Quick Tip

Scan for: (i) **number agreement** (singular/plural with nouns and verbs), (ii) **articles** ("a/an/the") before specific groups, (iii) **hyphenation** of set compounds (e.g., counter-charge), and (iv) whether added phrases are punctuated but still grammatical without them.

Q111. 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 days.

Correct Answer: (D) The information sought shall be made available within 90 days.

Solution:
Step 1: Recall the time-limits under RTI.
Under the RTI Act, a Public Information Officer (PIO) must provide information **within 30 days** of receiving the request.
Special cases: *within 48 hours* if the information concerns life or liberty; *within 35 days* when the application reaches the Assistant PIO first; and *within 40 days* where third-party notice is involved. $\Rightarrow$ $There is$**no 90-day**$limit anywhere.$
Step 2: Check each option.

(A) True—every public authority designates PIOs to furnish information.

(B) True—the PIO can be penalised up to ₹25,000 for unjustified refusal/delay.

(C) True—the Act establishes a Central Information Commission (CIC) and State Information Commissions (SICs).

(D) False—claims a 90-day limit, which contradicts the statutory 30-day framework.

$\Rightarrow$ **Not correct**.

(D) is the incorrect statement.

Quick Tip

Memorise RTI deadlines: **30 days** normal, **48 hours** life & liberty, **35/40 days** for special routing/third-party cases. Anything like 60 or 90 days is a red flag.

Q112. 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:

Step 1: Sort the "first estimate" vs "first scientific estimate."

- **Dadabhai Naoroji** made the *earliest* estimates (c. 1867–68) while articulating the "Drain of Wealth" and later in *Poverty and Un-British Rule in India*.

- **V. K. R. V. Rao** (1931–32, 1936–37) produced the *first rigorous/modern* estimates.

Step 2: Match the question's wording.

The prompt asks "*first* estimated . . . "

$\Rightarrow refers to the earliest attempt, not the first rigorous one.$

Hence, **Dadabhai Naoroji** is correct; others (Dutt, Gadgil) are noted economic historians but not credited with the very first estimate.

(A) Dadabhai Naoroji

Quick Tip

Exam trap: "*first estimate*" = Dadabhai **Naoroji**; "*first scientific/rigorous estimate*" = **V. K. R. V. Rao**.

Q113. 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:
Step 1: Recall standard regulatory ratios.
- **SLR**: Portion of a bank's *Net Demand and Time Liabilities (NDTL)* to be kept in liquid assets—cash, gold, or approved government securities—$\Rightarrow a$**liquidity**$buffer$.
- **CRR** (not listed here): Cash with RBI as a percent of NDTL.

Step 2: Evaluate options.
(B) **Statutory Liquid Ratio**—the recognised legal term and concept. $\Rightarrow$ **Correct**.
(A), (C), (D) are not standard regulatory terms in Indian banking.

(B) Statutory Liquid Ratio (SLR)

Quick Tip

Remember: **SLR** = liquid assets held by the bank itself; **CRR** = cash kept with the RBI. If CRR isn't an option and the description mentions liquid assets like cash/gilts with the bank, pick **SLR**.

Q114. 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:

Step 1: Identify what "Mexican dwarf wheat" refers to.

The term denotes the semi-dwarf, high-yielding wheat lines (e.g., *Lerma Rojo*, *Sonora*) developed in Mexico by **Norman E. Borlaug** using *Norin 10* dwarfing genes.

Step 2: Connect to India's Green Revolution.

In the mid-1960s, India *imported and trialled* these Mexican semi-dwarf varieties and their derivatives; this external supply—the actual "introduction" of the Mexican lines—came from Borlaug's programme. Indian scientists, prominently **M. S. Swaminathan** and institutions led by **B. P. Pal** (ICAR), then adapted, multiplied, and popularised them across India.

Step 3: Map options to roles.

- (A) Borlaug — breeder of the Mexican dwarf lines and source from which India obtained them $\Rightarrow matches \backslash introduced(broughtfrom)$."

- (B) Swaminathan — key Indian champion/adaptor; sometimes credited in narratives, but the question frames the "Mexican" lines' introduction, pointing to Borlaug.

- (C) Not associated with the wheat introduction in standard accounts.

- (D) B. P. Pal — ICAR leadership and support, but not the developer/source of the Mexican lines.

(A) Dr. N. E. Borlaug

Quick Tip

Differentiate roles: *developer/source* of Mexican dwarf wheat = **Borlaug**; *Indian leadership/adaptation and spread* = **Swaminathan** (with policy support like C. Subramaniam) and ICAR under **B. P. Pal**.

Q115. 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:

Step 1: Recall Russian/Soviet mission families.

- **Soyuz**: crewed spacecraft family servicing the ISS; capable of "fast rendezvous" profiles (4 orbits, $\approx$ 6 hours).

- **Sputnik**: early Earth-orbiting satellites (uncrewed, 1950s).

- **Zond**: circumlunar/uncrewed test missions.

- **Venera**: Venus probes.

Step 2: Match the 6-hour ISS rendezvous.

The record refers to the **Soyuz** adopting a 4-orbit rendezvous trajectory to dock with the ISS in around 6 hours, replacing the older 34-orbit (2–3 day) profile.

(B) Soyuz

Quick Tip

ISS $\Rightarrow$ think **Soyuz/Progress** (crew/cargo). Names like **Venera/Zond/Sputnik** signal different historic programmes (Venus, circumlunar, early satellites).

Q116. 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:
Step 1: Place Havell in context.
E. B. Havell was the **Principal of the Government School of Art, Calcutta** (early 20th century). He, along with **Abanindranath Tagore**, championed an indigenous aesthetic and pedagogy, opposing purely academic/European styles. This movement crystallised as the **Bengal School of Art**.
Step 2: Eliminate distractors by identity matching.
(A) Asiatic Society was founded by **Sir William Jones** (1784), not Havell.
(C) Major translators of Sanskrit dramas include **H. H. Wilson**, **Monier-Williams**, etc. — not Havell.
(D) The National Archives were developed under **G. W. Forrest** (and later others), not a Pune teacher named Havell.

$\boxed{\text{(B) Bengal School of Art}}$

Quick Tip

Link names to signature movements: **Havell + Abanindranath Tagore** $\Rightarrow$ **Bengal School**; **William Jones** $\Rightarrow$ Asiatic Society; **H. H. Wilson/Monier-Williams** $\Rightarrow$ Sanskrit translations.

Q117. 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:

Step 1: Recall the initiative.

The India Human Development Awards were conceptualised with UNDP support to recognise excellence in Human Development reporting and practice across Indian states and districts.

Step 2: Fix the year using the policy timeline.

The awards were *instituted/first launched in 2012* alongside a renewed push for state and district Human Development Reports. $\Rightarrow Baselineyear = 2012.$

Step 3: Eliminate alternatives.

2010 and 2011 predate the launch; 2013 reflects later award cycles/ceremonies, not the institution year.

$$\boxed{2012}$$

Quick Tip

When a question asks "*instituted*," pick the *first launch year*, not the year of a later ceremony or revision.

Q118. 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:

Step 1: Identify the author.

The Audacity of Hope: Thoughts on Reclaiming the American Dream (2006) is a political memoir/manifesto by **Barack Obama**.

Step 2: Eliminate distractors by signature works.

(A) Nayantara Sahgal — noted for works like *Rich Like Us*.

(B) Aravind Adiga — *The White Tiger*.

(C) Vikram Seth — *A Suitable Boy*.

Only (D) aligns with the given title.

Barack Obama

Quick Tip

Link authors to signature titles (Obama — *Dreams from My Father*, *Audacity of Hope*; Adiga — *The White Tiger*; Seth — *A Suitable Boy*) to speed eliminations.

Q119. 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:

Step 1: Fix the debut year.

Field hockey made its **Olympic debut in London 1908**. The sport was then dropped in 1912 Stockholm and reintroduced in 1920 Antwerp. $\Rightarrow The first appearance is 1908.$

Step 2: Eliminate distractors with timeline checks.

(B) Stockholm 1912 — hockey was *not* held.

(C) St. Louis 1904 — no hockey event.

(D) Paris 1900 — no official field hockey tournament.

$$\boxed{\text{London 1908}}$$

Quick Tip

Remember the sequence for Olympic hockey: **1908 London (debut)** $\Rightarrow$ **1912 Stockholm (dropped)** $\Rightarrow$ **1920 Antwerp (returned)**.

Q120. 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:

Step 1: Identify the personalities.

Larry Page and Sergey Brin co-founded the company *Google*, initially while at Stanford University. $\Rightarrow Their signature identity is$ **tech founders of Google**.

Step 2: Eliminate distractors.

(A) Bluetooth was developed by a team at Ericsson (not Page/Brin).

(C) They are not stem-cell researchers.

(D) Though they are technologists, the specific well-known identity is "*Google founders*," which Option (B) states exactly.

(B) Founders of Google

Quick Tip

For GK on tech figures, map *Page–Brin* $\Rightarrow$ **Google**, *Jobs–Wozniak* $\Rightarrow$ **Apple**, *Gates–Allen* $\Rightarrow$ **Microsoft**.

Q121. 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) bell-shaped relationship between pollution and per-capita real GDP

Solution:

Step 1: Recall the EKC idea.

The EKC posits an **inverted-U (bell-shaped)** relationship: at low incomes, pollution *rises* with income; beyond a turning point, higher income leads to *declining* pollution due to regulation, technology, and preferences.

Step 2: Match with options.

(A) Says "increase in income increases pollution" only—no turning point.

$\Rightarrow incomplete/incorrect.$

(B) Says "U-shaped" (low at first, high later), which is the opposite orientation to EKC's *inverted* U. $\Rightarrow wrong.$

(C) Mixes variables and keeps a U-shape; EKC is not framed with ozone depletion like this. $\Rightarrow wrong.$

(D) States a **bell-shaped** (inverted-U) link between pollution and per-capita GDP. $\Rightarrow correct.$

(D) Inverted-U (bell) relationship

Quick Tip

EKC = **inverted U**: pollution rises ⇒ peaks ⇒ falls as income grows past a threshold.

Q122. 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:

Step 1: Recall the scopes of the conventions.

• **Vienna Convention (1985)**: framework for *protection of the ozone layer* (correct).

• **Montreal Protocol (1987)**: follows Vienna—controls ozone-depleting substances (for awareness).

• **Basel Convention (1989)**: *transboundary movement of hazardous wastes and their disposal* (not POPs).

• **Rotterdam Convention (1998)**: *hazardous chemicals and pesticides in international trade* via PIC procedure (correct).

• **Stockholm Convention (2001)**: *persistent organic pollutants (POPs)* (not hazardous wastes).

Step 2: Evaluate each pairing.

1 — Correct.

2 — Incorrect (Stockholm is POPs, not hazardous wastes).

3 — Correct (Rotterdam = hazardous chemicals/pesticides).

4 — Incorrect (Basel = hazardous wastes; POPs belong to Stockholm).

Correct pairs: 1 and 3 only (Option B)

Quick Tip

Mnemonic: **Vi**enna–**O**zone (**V/O**), **Bas**el–**W**aste (**B/W**), **Rot**terdam–**C**hemicals (**R/C**), **Sto**ckholm–**P**OPs (**S/P**).

Q123. 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:

Step 1: Recall the formulae.

Primary Deficit (PD) = Fiscal Deficit (FD) − Interest Payments.

Interpretation: PD measures the borrowing requirement *excluding* the burden of past debt (interest).

Step 2: Map options to standard deficit terms.

(A) Revenue Expenditure − Revenue Receipts ⇒ **Revenue Deficit**, not PD.

(B) "Capital Receipts − Interest Payments" ⇒ not a standard deficit.

(C) Matches definition: PD = FD − Interest. ⇒ **True**.

(D) "FD + Interest" ⇒ incorrect operation.

$$\boxed{\text{Primary Deficit} = \text{Fiscal Deficit} - \text{Interest Payments}}$$

Quick Tip

Think: *Primary* = *core gap* before paying for past debt. So always do FD − Interest.

Q124. 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:

Step 1: Place the slogan historically.

"*Garibi Hatao*" became the political–planning focus under Indira Gandhi in the early 1970s.

Step 2: Link to plan period.

The **Fifth Five Year Plan (1974–79)** emphasized poverty removal, employment, and *Minimum Needs Programme*. ⇒ $Matchestheslogan.$

Step 3: Eliminate others.

Second Plan (Mahalanobis—heavy industry); Fourth Plan (1969–74—stability/growth); Sixth Plan (1980–85—technology, productivity). None center the slogan.

$$\boxed{\text{Fifth Five Year Plan (1974–79)}}$$

Quick Tip

Match slogans to plans: **Garibi Hatao** $\Rightarrow$ **Fifth Plan**; **Heavy industry** $\Rightarrow$ **Second Plan**.

Q125. 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:

Step 1: What is REDD+?

REDD+ = "**R**educing **E**missions from **D**eforestation and forest **D**egradation, plus conservation, sustainable management of forests and enhancement of forest carbon stocks." It links forest protection with climate and biodiversity co-benefits.

Step 2: Match to the list of frameworks given.

Although the *mechanism was negotiated under the UNFCCC*, among the options the convention that directly frames biodiversity safeguards and co-benefits for REDD+ activities is the **CBD**. Hence, from the choices provided, **(B)** is the best match.

Step 3: Rule out distractors.

(A) NPT—nuclear arms control; (C) MDGs—development goals (no specific forest carbon mechanism); (D) Earth Summit—umbrella conference (1992) rather than a specific convention/programme.

Convention on Biological Diversity (CBD)

Quick Tip

Exam nuance: REDD+ originated under **UNFCCC**, but biodiversity *safeguards/co-benefits* are anchored by the **CBD**. If UNFCCC isn't an option, pick **CBD**.

Q126. 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:

Step 1: Fix the comparison metric.

"Largest" for stock exchanges is conventionally by *total market capitalization of listed companies*.

Step 2: Recall the global ordering.

By this metric, **NYSE** is the world's largest exchange. LSE and SWX are significantly smaller; **NSE** is among the top global exchanges but not *the* largest.

NYSE is the largest by market capitalization.

Quick Tip

When "largest stock exchange" appears, assume the lens is *market capitalization*. NYSE $\Rightarrow \#1; NASDAQ often \#2$.

Q127. 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:

Step 1: Identify the belligerents.

Stalingrad (now Volgograd) was the pivotal *Eastern Front* battle of World War II between **Nazi Germany** (with Axis allies) and the **Soviet Union (Russia)**.

Step 2: Eliminate distractors.

(B) Russia vs Japan refers to the Far East, not Stalingrad.

(C) Germany and Italy were allies, not opposing sides here.

(D) Italy vs Russia is incorrect; Italy was an Axis ally of Germany.

Soviet Union (Russia) vs Germany

Quick Tip

"Stalingrad" $\Rightarrow think$**Eastern Front**$and the turning point$: **USSR vs Germany**.

Q128. 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:

Step 1: Recall the UN designation.

The UN first marked an International Day for Natural Disaster Reduction in 1989 (second Wednesday of October). In 2009, the UN fixed a specific date—**13 October**—and reframed it as the *International Day for Disaster Reduction*.

Step 2: Eliminate other dates.

The other options are unrelated to this UN observance. Therefore, 13 October is correct.

13 October

Quick Tip

Think "**O**ctober 13" for **D**isaster **R**eduction Day—O13 $\Rightarrow DRR$.

Q129. 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:

Step 1: Recall India–China bilateral exercise name.

The counter-terrorism/infantry joint drill with China is branded **Hand-in-Hand** (conducted at locations like Kunming, Belgaum/Pune, etc.).

Step 2: Eliminate look-alike exercises with other countries.

(A) **Surya–Kiran** $\Rightarrow India–Nepal.$

(C) "Mitra–Maitri" is a mix of two different names: **Mitra Shakti** (India–Sri Lanka) and **Maitree** (India–Thailand).

(D) **Yudh Abhyas** $\Rightarrow India–USA.$

Step 3: Match with the Pune iteration.

The Pune/Belgaum editions with China are specifically titled **Hand-in-Hand**. Hence option (B).

Hand-in-Hand 2014

Quick Tip

Map the pairings: **Hand-in-Hand** (China), **Surya-Kiran** (Nepal), **Yudh Abhyas** (USA), **Mitra Shakti** (Sri Lanka), **Maitree** (Thailand).

Q130. What would you study if you were a *speleologist*?

(A) Mineral deposits

(B) Tress

(C) Birds

(D) Caves

Correct Answer: (D) Caves

Solution:

Step 1: Decode the root.

Speleon (Greek) means "cave". **Speleology** is the scientific study of caves, karst processes, and cave ecosystems.

Step 2: Eliminate similar-sounding fields.

(A) Mineral deposits $\Rightarrow Economicgeology/mineralogy.$

(B) "Tress" likely intends *trees* $\Rightarrow Dendrology/botany.$

(C) Birds $\Rightarrow Ornithology.$

Step 3: Select the precise discipline.

Caves correspond to speleology. Hence (D).

$$\boxed{\text{Caves}}$$

Quick Tip

Word roots help: *ornis* (bird) $\rightarrow$ ornithology; *dendron* (tree) $\rightarrow$ dendrology; *speleon* (cave) $\rightarrow$ speleology.

Q131. 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:

Step 1: Understand the construction.

Take two *fixed–floating* currency swaps in opposite directions; the floating legs net out, leaving **fixed payments in two currencies** (fixed-to-fixed). This composite is termed a **circus swap**.

Step 2: Differentiate the other terms.

(A) **Roller-coaster** swap: notional oscillates up and down across periods.

(B)&(C) **Amortized/Amortizing** swap: notional *declines* over time.

Neither converts two fixed–floaters into fixed–fixed.

Step 3: Conclude.

Only (D) names the fixed–fixed composite: **circus swap**.

Circus swap

Quick Tip

Think "two tents make a **circus**": combine two fixed–floating tents (legs) $\Rightarrow$ one fixed–fixed show.

Q132. 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:

Step 1: Recall the definition.

The **monetary base** (also called **reserve money** or **high powered money**) is defined as the *RBI's monetary liabilities* to the public and to banks:

$\Rightarrow$ currency in circulation + bankers' deposits with RBI + other deposits with RBI.

Step 2: Map to the options.

(A) Total *assets* of RBI — wrong measure; base money relates to *liabilities*.

(B) Total *liability* of RBI — captures the concept of reserve money. $\Rightarrow$ **Correct**.

(C) Government debt — unrelated to monetary base.

(D) RBI's foreign exchange reserves — a component on the *asset* side, not the definition of base money.

$$\boxed{\text{Monetary base } = \text{RBI's monetary liabilities (Option B)}}$$

Quick Tip

High powered money is "**RBI liabilities**" that power money creation: currency with public + bank reserves at RBI.

Q133. 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:

Step 1: Historical role.

Founded in **1694**, the **Bank of England** pioneered central banking practices (note issue, lender of last resort, monetary policy traditions), hence the sobriquet "*mother of all central banks*."

Step 2: Eliminate distractors.

(B) The Swedish **Riksbank** is the *oldest* bank (1668) but the phrase "mother of central banks" commonly refers to the BoE's influence.

(C) US Federal Reserve (1913) and (D) RBI (1935) are later institutions.

Bank of England

Quick Tip

Oldest by age: **Riksbank**; "mother of central banks" (model/influence): **Bank of England**.

Q134. 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:

Step 1: Identify the film marketed with this tagline.

The 1997 Hindi film **Pardes** (dir. Subhash Ghai) explored NRIs and Indian values and used the tagline "*American dream, Indian soul*."

Step 2: Eliminate others.

(A) *American Desi* (2001) is a US indie comedy; not marketed with this exact line.

(B) *Aa Ab Laut Chalein* (1999) has a return-to-India theme but different publicity line.

(C) *Indian* is a 1996 Tamil film; unrelated tagline.

Pardes

Quick Tip

Associate taglines with themes: NRIs/values clash $\Rightarrow$ **Pardes** — "American dream, Indian soul."

Q135. 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:

Step 1: Recall the 42nd Constitutional Amendment (1976).

The 42nd Amendment—often called the "Mini-Constitution"—*inserted* the words **"Socialist"** and **"Secular"** into the **Preamble** and changed "unity of the Nation" to "*unity and integrity of the Nation*."

Step 2: Eliminate distractors.

Directive Principles and Fundamental Rights were also modified in 1976, but the specific insertion of the two words pertains to the *Preamble*. "All of the above" would be incorrect because those words were *not* added to Parts III or IV—only to the Preamble.

Preamble

Quick Tip

Keep the 42nd Amendment trio with the Preamble: "**Socialist, Secular, Integrity**" were all Preamble insertions/changes in 1976.

Q136. 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: (D) Mahatma Gandhi

Solution:

Step 1: Place the phrase historically.

In his 1947 *Tryst with Destiny* speech, **Jawaharlal Nehru** said: "The ambition of the greatest man of our generation has been to wipe every tear from every eye," *referring to Gandhi*. Thus the **aim** belongs to **Mahatma Gandhi**.

Step 2: Interpret the aim.

Gandhi's work for the "last person" (*Antyodaya*) and *Sarvodaya* embodies this ideal—freedom and uplift for the poorest and most vulnerable. Hence option (D).

Mahatma Gandhi

Quick Tip

Remember: Nehru *quoted* the aim in 1947, but he credited it to **Gandhi**. The exam asks whose aim it was $\Rightarrow$ **Gandhi**.

Q137. 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:

Step 1: State the core mandate.

Amnesty International is a global non-governmental organisation that campaigns for *human rights*—e.g., ending torture, opposing arbitrary detention, defending freedom of expression, and protecting prisoners of conscience.

Step 2: Eliminate distractors.

(A) Animal welfare is the remit of organisations like PETA or SPCA.

(B) Environment falls under groups such as WWF or Greenpeace.

(D) Heritage/monuments are associated with bodies like UNESCO/ASI.

Therefore, (C) is correct.

Protection of human rights

Quick Tip

If you see "prisoners of conscience" or global rights campaigns, think **Amnesty International**.

Q138. Google's main shopping service is called

(A) Froggle

(B) Cragle

(C) Doulde

(D) Ibibo

(E) Google+

Correct Answer: (A) Froggle

Solution:

Step 1: Identify Google's shopping product branding.

Google originally launched its price-comparison/shopping search as *Froogle* (often misspelled as "Froggle"), later rebranded to *Google Product Search* and then *Google Shopping*. In option sets like this, the intended legacy name is Froogle/Froggle.

Step 2: Eliminate distractors by product/domain.

(B) "Cragle" and (C) "Doulde" are not Google products.

(D) *Ibibo* is an Indian social/tech brand, unrelated to Google Shopping.

(E) *Google+* was Google's social network, not the shopping service.

(A) Froggle

Quick Tip

When options look like misspellings, map to the *closest known Google brand*: Froogle (shopping), Blogger (blogging), Orkut/Google+ (social), etc.

Q139. 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:

Step 1: Match the scope (population vs. individual).

Epidemiology studies the *distribution and determinants of health and disease in populations* and applies this to control health problems. $\Rightarrow Community/population focus.$

Step 2: Eliminate look-alike disciplines.

(B) **Oncology**: study and treatment of cancers (clinical specialty).

(C) **Paleontology**: study of fossils (earth/life history), not medicine.

(D) **Pathology**: mechanism and diagnosis of disease at the organ/tissue/cellular level—primarily *individual* rather than population focus.

Epidemiology

Quick Tip

Population-level disease patterns ⇒ **epidemiology**; organ/tissue diagnosis ⇒ **pathology**; cancer-specific ⇒ **oncology**.

Q140. 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:

Step 1: Identify the universal external-device interface.

USB (Universal Serial Bus) supports hot-plugging, high data throughput, and the *Mass Storage Class*—ideal for pen drives, external HDDs/SSDs, card readers, etc.

$\Rightarrow Most appropriate choice for external storage.$

Step 2: Eliminate other ports by typical use.

(A) **VGA**: analog *video* output to monitors; not for storage.

(C) **Parallel** (legacy): used primarily for old printers/scanners; rarely for storage and largely obsolete.

(D) **Serial** (RS-232): legacy comms for modems/mice; not standard for modern storage devices.

USB port

Quick Tip

Think external storage? Choose the interface with "Mass Storage Class" and hot-plugging: **USB**.

Q141. 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:

Step 1: Match the unique scientific clues.

The *crescograph* is a precision instrument to record *minute plant-growth movements*. It was designed by **J. C. Bose** while studying plant physiology.

$\Rightarrow Thissingleclue already points to Bose.$

Step 2: Cross-check with other descriptors.

Bose publicly demonstrated *wireless/radio* signalling (1895) and did foundational work with millimetre waves, earning the epithet "**father of radio science**" in India. He also authored an early Bengali science-fiction short story *Niruddesher Kahini* (1896).

$\Rightarrow All descriptors consistently match Bose.$

Step 3: Eliminate distractors.

(A) Homi Bhabha — nuclear science/atomic energy; not linked to crescograph.

(C) C. V. Raman — optics/Raman effect (Nobel).

(D) Har Gobind (Govind) Khorana — genetic code, nucleotide synthesis (Nobel).

Jagadish Chandra Bose

Quick Tip

Remember: **crescograph** ⇒ plant growth ⇒ **J. C. Bose**; radio-wave pioneer (India) and early Bengali sci-fi author — all the same person.

Q142. 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:

Step 1: Recall the 18th SAARC Summit package (Kathmandu, 2014).

The Cabinet cleared *three* specific texts:

(i) **SAARC Motor Vehicles Agreement** (people/goods movement by road),

(ii) **SAARC Regional Railways Agreement** (rail connectivity framework), and

(iii) **SAARC Framework Agreement for Energy Cooperation (Electricity)**

(cross-border power trade).

Step 2: Identify the odd statement.

"**SAARC Inter-governmental Transport Connectivity**" is not the title of any cleared agreement; it is only a generic phrase. $\Rightarrow This option is \textbf{not} one of the three named agreements.$

(D) Not among the approved SAARC agreements

Quick Tip

Lock the triad for SAARC-2014: **Motor Vehicles**, **Regional Railways**, and **Energy (Electricity)**. Any other phrasing is likely a distractor.

Q143. 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:

Step 1: Recall what a fallstreak (hole-punch) cloud is.

A fallstreak hole is a large circular/elliptical gap in a cloud layer caused when super-cooled droplets suddenly freeze (often after an aircraft passes), making ice crystals fall and leave a "punched" hole.

Step 2: Link the news location to the correct country.

The viral photographs and reports were from **Gippsland, eastern Victoria**—a region of the state of **Victoria in Australia**.

$\Rightarrow Among the choices, only \textbf{(C)} matches both the region and country.$

Gippsland, eastern Victoria, Australia

Quick Tip

"Gippsland" is a dead giveaway—associate it with **Victoria (Australia)**.

Q144. 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:

Step 1: Expand the acronym using typical smart-city wording.

City traffic platforms are labelled "*Traffic Integrated* ***Management*** *System*" (TIMS/TRIMS) because they integrate signals, cameras, GPS feeds, and control rooms to *manage* traffic.

Step 2: Eliminate distractors.

"Maintenance/Manipulation/Inked" do not match standard naming and do not reflect the platform's function. Hence **Hyderabad Traffic Integrated Management System**.

Hyderabad Traffic Integrated Management System

Quick Tip

In urban-tech acronyms, **I = Integrated**, **M = Management**. If it's a city traffic platform, expect "*Integrated Management System*."

Q145. 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:

Step 1: Decode "passed a resolution."

When questions say an "*international organisation* passed a resolution," they usually refer to the **United Nations General Assembly**, which adopts resolutions urging member states on issues like sports autonomy and sport for development/peace (alongside the Olympic Truce).

Step 2: Eliminate other bodies.

IOC and Commonwealth bodies issue charters or declarations, not UN-style *resolutions*; APEC focuses on economic cooperation in the Asia-Pacific, not global sports policy.

$\Rightarrow$ **United Nations** $fitsbest.$

United Nations (UN General Assembly)

Quick Tip

"Passed a *resolution* ... promote peace and development through sport" $\Rightarrow$ $think$**UN General Assembly**.

Q146. 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:

Step 1: Identify the award.

The *Philadelphia Liberty Medal* (now administered by the National Constitution Center) honours individuals/organizations advancing liberty worldwide.

Step 2: Fix the establishment year and reason.

It was *established in 1988* as part of the celebrations around the **bicentennial of the U.S. Constitution** (drafted in 1787). The first presentation followed soon after (to Lech Wałesa, 1989), but the institution year is **1988**.

1988 (bicentennial of the U.S. Constitution)

Quick Tip

Watch the wording: "*established in*" refers to the year the award was instituted, which can differ from the first year it was presented.

Q147. The Union Commerce Ministry recently cancelled approvals of nine Special Economic Zones (SEZs).

I. Hindalco Industries II. Chennai Business Park III. Essar Jamnagar IV. Adani Townships and Real Estate Company

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:

Step 1: Recall the policy action.

The Board of Approval (BoA) under the Commerce Ministry periodically *cancels or denotifies* SEZ approvals when promoters fail to implement projects within stipulated time or seek withdrawal.

Step 2: Match the names in the cancellation list.

Among the nine cancellations reported in that round, entities included **Hindalco Industries**, **Chennai Business Park**, **Essar (Jamnagar)**, and **Adani Townships & Real Estate Company**, among others.

Step 3: Conclude.

Since all four names formed part of the cancelled approvals, the correct choice lists *all* of them.

I, II, III and IV (Option D)

Quick Tip

For current-affairs list questions, scan for the option that includes *all* entities you recognize from the same news item—partial subsets are often distractors.

Q148. 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:

Step 1: Verify the theme.

LPR 2014 was framed around the tagline *"Species and Spaces, People and Places."*

$\Rightarrow Iistrue.$

Step 2: Check the headline population finding.

The Living Planet Index reported an overall **52% decline** in monitored vertebrate populations (1970–2010). $\Rightarrow IIistrue.$

Step 3: Look at the biome breakdown.

The steepest fall was in **freshwater species**, reported at about **76%** decline over the same period. $\Rightarrow IIIistrue.$

Step 4: Source of the Ecological Footprint metric.

The Ecological Footprint used in LPR is compiled by the **Global Footprint Network (GFN)**. $\Rightarrow IVistrue.$

All four statements are correct (Option D).

Quick Tip

For LPR-2014, remember the triad: **Theme** (Species & Spaces), **52% overall decline**, and **76% freshwater decline**. Footprint data source = **GFN**.

Q149. *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:

Step 1: State the objective.

VKY is a **flagship, convergence-based** initiative aiming at *holistic development of Scheduled Tribes* by creating an enabling environment for good governance and service delivery—education, health, livelihood, infrastructure—so that HDI indicators for tribal communities **significantly improve**.

Step 2: Evaluate options.

(B) speaks to a specific rights safeguard (important but not the core VKY formulation).

(C) and (D) are narrower actions, not the stated umbrella goal.

Thus the correct, overarching purpose is **raising human development indices** (A).

(A) Improve HDI outcomes for tribal communities

Quick Tip

VKY = **holistic tribal development** via convergence — think **HDI uplift**, not a single-sector scheme.

Q150. 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:

Step 1: Recall India's modern great in billiards/snooker.

Pankaj Advani clinched the 2014 IBSF World Billiards Championship (points format), defeating Singapore's Peter Gilchrist in the final—adding to his tally of world titles across billiards and snooker.

Step 2: Eliminate distractors.

(B) **Geet Sethi** is a multiple-time world champion from an earlier era, but not the 2014 winner; (A) is not associated with this title; hence **(C)** is correct.

Pankaj Advani

Quick Tip

Two Indian legends in English billiards: **Geet Sethi** (earlier) and **Pankaj Advani** (recent era). For 2014, pick **Advani**.
