

## ANSWER KEY

Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
1	1	26	2	51	4	76	2	101	1	126	2
2	2	27	2	52	1	77	1	102	3	127	4
3	1	28	2	53	3	78	1	103	1	128	2
4	1	29	4	54	2	79	2	104	2	129	4
5	1	30	1	55	4	80	1	105	4	130	2
6	1	31	3	56	2	81	2	106	3	131	2
7	2	32	2	57	1	82	3	107	1	132	2
8	4	33	3	58	3	83	2	108	4	133	2
9	2	34		59	2	84	1	109	1	134	2
10	3	35	2	60	2	85	2	110	1	135	1
11	1	36	1	61	4	86	1	111	2	36	1
12	4	37	4	62	3	87	3	112	3	137	4
13	2	38	2	63	2	88	1	113	4	138	2
14	4	39	4	64	3	89	2	114	1	139	3
15	3	40	2	65	2	90	4	115	4	140	4
16	2	41	1	66	4	91	2	116	2	141	1
17		42	1	67	2	92	4	117	4	142	2
18	1	43	3	68	2	93	3	118	3	143	2
19	4	44	1	69	2	94	3	119	2	144	3
20	2	45	2	70	4	95	4	120	4	145	2
21	1	46	1	71	4	96	3	121	2	146	3
22	3	47	3	72	1	97	3	122	3	147	1
23	4	48	1	73	3	98	3	123	2	148	1
24	2	49	2	74	2	99	2	124	2	149	4
25	1	50	3	75	4	100	2	125	3	150	2

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## Detailed Solutions:

1. Total revenue of the month =  $30 \times 10000 = 300000$   
Revenue on weekend =  $8 \times 20000 = 160000$   
 $\therefore$  Revenue on other 22 days =  $300000 - 160000$   
 $= 140000$

$$\therefore \text{Average daily revenue on weekdays} = \frac{140000}{22}$$
$$\approx 6364$$

Hence, **option 1**.

2. Prime numbers  $X$  and  $Y$  are greater than 2, hence, they must be odd.  
Difference of two odd numbers is even. Hence, option 1 is definitely false.

Sum of two odd numbers is even. Hence option 2 must be true.

Hence, **option 2**.

3. In 1 hour, pump A and B can fill  $\frac{1}{6}$  and  $\frac{1}{8}$  of the tank respectively.

If C fills  $\frac{1}{x}$  of the tank in 1 hour,

$$\frac{1}{6} + \frac{1}{8} + \frac{1}{x} = \frac{1}{2}$$

$$\therefore x = \frac{24}{5} = 4.8 \text{ hours}$$

Hence, **option 1**.

4. Pipe A can fill the pool in 3 hours and pipe B can fill the pool in 6 hours.

Pump A starts at 9 am and B starts at 10 am.

A alone fills for 1 hour. Let A and B together fill for  $n$  hours after 10 am.

Then

$$\frac{1}{3} + n\left(\frac{1}{3} + \frac{1}{6}\right) = 1$$

$$\therefore n = \frac{4}{3} \text{ hours} = 1 \text{ hour and 20 minutes.}$$

Hence, pool will be filled by 11:20 am

Hence, **option 1**.

5. 61 and 67 are the only prime numbers that are greater than 60 and less than 70.

$$\therefore \text{Sum of these numbers} = 61 + 67 = 128$$

Hence, **option 1**.

6. The difference between two consecutive numbers of the series is 2, 4, 6, 8, 10, 12, ...

Note that these differences are in A.P. with the common difference being 2.

$$\therefore \text{Next term} = 42 + 14 = 56$$

Hence, **option 1**.

7. Number of rolls initially = 40 dozens.

After selling half the rolls, the number of rolls left = 20 dozen

Now, between noon and closing time 60% of the remaining rolls were sold.

Hence, 40% of 20 dozen rolls = 8 dozen rolls were left unsold.

Hence, **option 2**.

8. Let Stuart finish the work in  $s$  days, Jack in  $j$  days and Leo in  $l$  days.

$$\frac{1}{s} + \frac{1}{j} = \frac{1}{10}$$

$$\frac{1}{j} + \frac{1}{l} = \frac{1}{15}$$

$$\frac{1}{s} + \frac{1}{l} = \frac{1}{12}$$

$$\therefore 2\left(\frac{1}{s} + \frac{1}{j} + \frac{1}{l}\right) = \frac{1}{10} + \frac{1}{15} + \frac{1}{12} = \frac{(6 + 4 + 5)}{60} = \frac{1}{4}$$

$$\therefore \frac{1}{s} + \frac{1}{j} + \frac{1}{l} = \frac{1}{8}$$

$\therefore$  Together they can finish  $\frac{1}{8}$ th of work in one day.

For two days they worked together, after which Leo was shifted to some other work.

Let Stuart and Jack take  $n$  days to finish the remaining work.

$$\therefore 2 \times \frac{1}{8} + n\left(\frac{1}{10}\right) = 1$$

$$\therefore n = 7.5 \text{ days}$$

Hence, **option 4**.

9. Consider given series, 1 : 1, 8 : 4, 9 : 27, 64 : 16, 25 : 125, ? : ?, 49 : 343

Note that the  $n^{\text{th}}$  term of the series, if  $n$  is odd =  $n^2 : n^3$   
and if  $n$  is even,  $n^{\text{th}}$  term =  $n^3 : n^2$   
Hence, sixth pair will be,  $6^3 : 6^2 = 216 : 36$   
Hence, **option 2**.

10. Let  $x$  be the required number.  
Now, increasing  $x$  by 25% gives  $1.25x$  and 30% decrease in  $x$  gives  $0.7x$   
Now,  $1.25x - 0.7x = 0.55x = 22$

$$\therefore x = \frac{22}{0.55} = 40$$

Hence, **option 3**.

11. 6 machine can produce 180 bottles per hour  
Hence, 1 machine can produce  $180/6 = 30$  bottles per hour and 15 bottles in 30 minutes.  
 $\therefore$  15 machines can produce  $15 \times 15 = 225$  bottles per hour.  
Hence, **option 1**.

12. Let the number be  $x$ .

$$\therefore \frac{x}{5} + 4 = \frac{x}{4} - 10$$

$$\therefore 14 = \left(\frac{1}{4} - \frac{1}{5}\right)x$$

$$\therefore x = 20 \times 14 = 280$$

Hence, **option 4**.

13.  $461 + 462 + 463 + 464 = 1850$   
Among the given options only 10 divides 1850.  
Hence, **option 2**.

14. If  $a = 5$ , and  $b = 3$ , then  $5 + 3 = 8$  is positive and  $5 - 3 = 2$  is positive.  
If  $a = 5$  and  $b = -3$ , then  $5 - 3 = 2$  is positive and  $5 - (-3) = 8$  is positive.  
Thus  $b$  can be positive or negative irrespective of what sign  $(a + b)$  and  $(a - b)$  take.  
Hence, the question cannot be answered using statement I alone or statement II alone.

**Using both the statements together,**

$a + b + a - b$  is positive

i.e.  $2a$  is positive

$\therefore a$  is positive.

Using the same argument as above, we still cannot say anything about the sign of  $b$ .

Hence, **option 4**.

15. Let  $p$ ,  $q$  and  $r$  be the number of votes received by  $p$ ,  $q$  and  $r$  respectively.

**Using statement I alone,**

$$p = q + 17 \text{ and } p = r + 103$$

But this is not sufficient to find the number of votes that each received.

Hence, statement I alone is not sufficient to answer the question.

**Using statement II alone,**

$$\text{Total votes} = 1703$$

But the breakup of these votes is not given

$\therefore$  Statement II is not sufficient to answer the question.

**Using both the statements together,**

$$3p - 120 = 1703$$

Hence,  $p$  can be calculated and hence  $p$ ,  $q$  and  $r$  can be calculated.

Hence, the question can be answered using both the statements together.

Hence, **option 3**.

16. Let  $R$  and  $r$  be the radii of the outer and inner circle respectively.

**Using statement I alone,**

Statement I mentions nothing about the radii of the circles. Hence,  $C_1 : C_2$  cannot be calculated.

Hence, statement I alone is not sufficient to answer the question.

**Using statement II alone,**

$$\frac{(\text{Area of ring})}{(\text{Area of greater circle})} = \frac{2}{3}$$

$$\therefore \frac{\pi(R^2 - r^2)}{\pi R^2} = \frac{2}{3}$$

$$\therefore \frac{R}{r} = \frac{\sqrt{3}}{1}$$

$$\text{Now, } \frac{C_1}{C_2} = \frac{2\pi R}{2\pi r} = \frac{R}{r}$$

Hence,  $C_1 : C_2$  can be calculated by using statement II alone.

Hence, **option 2**.

17. Let the numbers be  $(n - 3)$ ,  $(n - 2)$ ,  $(n - 1)$ ,  $n$ ,  $(n + 1)$ ,  $(n + 2)$  and  $(n + 3)$ .

**Using statement I alone,**

$$(n - 3)(n - 2)(n - 1)n(n + 1)(n + 2)(n + 3) = 702800$$

Note that the product of seven consecutive numbers will always be unique. Hence, the data is sufficient to find the value of  $n$ .

Taking  $n = 7$ , we get the product as 604800, while taking  $n = 8$ , we get the product as 1663200.

Hence, there exists no whole number such that the given condition holds true.

Hence, the question can be solved using statement I alone.

**Using statement II alone,**

We get,

$$(n - 3) + (n - 2) + (n - 1) + n + (n + 1) + (n + 2) + (n + 3) = 105$$

$$\therefore n = 15$$

Hence, the question can be solved using statement II alone.

There is no such option for questions which can be solved using either of the statements.

18. Let  $p, q, r$  and  $s$  be the marks obtained by P, Q, R and S.

$$\therefore p + q + r + s = 360$$

**Using statement I alone,**

$$p = \frac{1}{3}(q + r + s)$$

$$\therefore (q + r + s) = 3p$$

$$\therefore p + (q + r + s) = 360$$

$$\therefore p + 3p = 360$$

$$\therefore p = 90$$

Hence, statement I alone is sufficient to answer the question.

**Using statement II alone,**

$$\frac{q + r}{2} = s + 20$$

$$\therefore q + r = 2s + 40$$

$$\therefore p + q + r + s = 360$$

$$\therefore p + 2s + 40 + s = 360$$

$$\therefore p + 3s + 40 = 360$$

Now we are left with two variables and one equation. Hence, the question cannot be answered using statement II alone.

Hence, **option 1.**

19. **Using statement I alone,**

The height of container is not known. Thus neither the volume of the container nor the volume of the cube is known.

Hence, the question cannot be answered using statement I alone.

**Using statement II alone,**

Volume of ice cube is given, but the volume of container is not known.

Hence, the question cannot be answered using statement II alone.

**Using both the statements together,**

Volume of the ice cube is known but the volume of container is not known. Hence the question cannot be answered.

Hence, **option 4.**

20. **Using statement I alone,**

The dividend paid last year does not tell us anything about the dividend paid in the current year.

Hence, the question cannot be answered using statement I alone.

**Using statement II alone,**

We know the number of shares Ram has and the denomination of shares.

$$\therefore \text{Dividend that Ram got} = 1500 = (350 \times 10 \times \text{Rate})/100$$

Hence, the rate can be calculated.

Hence, the question can be answered using statement II alone.

Hence, **option 2.**

21. The data given is summarized (approximate values) in the table

	2005	2006	% increase in Sales in 2006 over 2005
Voveran	16.25	23	41.5
Calpol	13	18	38.46
Nise	15	18.25	21.67
Combiflam	9	13.5	50
Dolonex	6.5	10.25	57.7
Sumo	5	7.5	50
Volini	7	9.5	35.7
Moov	3.5	5	42.85
Nilmulid	3.25	5	53.84

The difference between sales of Voveran in 2006 and sales of Calpol in 2005 =  $23 - 13 = 10$  crores

= 1000 lakhs

Hence, **option 1.**

22. Other than Dolonex, the sales of none of the other brands given in the options have shown an increase of more than 50%.  
Hence, **option 3.**
23. The percentage increase in sales of Nise is the lowest.  
Hence, **option 4.**
24. The approximate percentage increase in the sales of voveran from 2005 to 2006 is

$$\frac{23 - 16.25}{16.25} \times 100 = \frac{6.75}{16.25} \times 100 = 41.5\%$$

Option 2 is the closest answer.

Hence, **option 2**.

25. The first two shapes are same with the sequence of colours interchanged. Following a similar pattern, option 1 is the correct answer.

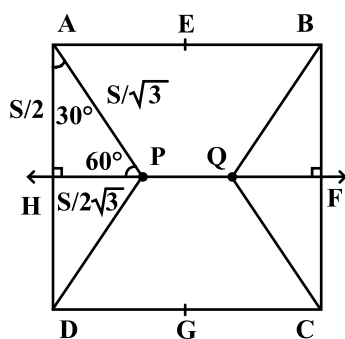
Hence, **option 1**.

26.  $x = \frac{1}{2} \times \frac{1}{4} \times \frac{1}{10} \times 400 = 5$

Hence, **option 2**.

27. Note - If we solve for the ratio of the area of ABCQPD to the remaining area of ABCD none of the option matches.

We assume that the question asks for the ratio of area of polygon ABQCDP to the remaining area of ABCD.



Let  $s$  be the side of the square.

Also  $\angle APH = 60^\circ$ ,  $\angle AHP = 90^\circ$  and  $\angle PAH = 30^\circ$

Also,  $AH = \frac{s}{2}$

$\therefore HP = \frac{s}{2\sqrt{3}}$

$\therefore A(\Delta APD) = \frac{1}{2} \times s \times \frac{s}{2\sqrt{3}} = \frac{s^2}{4\sqrt{3}}$

Similarly,  $A(\Delta BQC) = \frac{s^2}{4\sqrt{3}}$

$A(ABQCDP) = A(\square ABCD) - A(\Delta APD) - A(\Delta BQC)$

$= s^2 - \frac{s^2}{2\sqrt{3}} = \frac{s^2(2\sqrt{3}-1)}{2\sqrt{3}}$

$\therefore$  Required ratio  $= \frac{A(ABQCDP)}{2A(\Delta BQC)}$

$= \frac{(2\sqrt{3}-1)}{2\sqrt{3}} \times \frac{2\sqrt{3}}{1} = 2\sqrt{3} - 1$

Hence, **option 2**.

28.  $100 + 0.1n = 85 + 0.15n$

$\therefore n = 300$

But  $n \neq 300$ , as the price of Darjeeling Tea remains constant after the 100<sup>th</sup> day

On the 100<sup>th</sup> day and later the price of Darjeeling Tea is Rs. 110 per kg.

The price of Ooty tea becomes 110 on the 167<sup>th</sup> day which is 16<sup>th</sup> June.

Hence, **option 2**.

29. **Using statement I alone,**

Two triangles can have the same area even they are not congruent.

$\therefore$  Statement I is not sufficient to answer the question.

**Using statement II alone,**

Just by having the information that two triangles are right angled triangle one cannot conclude that the two triangles are congruent.

$\therefore$  Statement II is not sufficient to answer the question.

**Using both the statements together,**

Let  $b_1$  and  $h_1$  be the base and height of  $\Delta ABC$  and let  $b_2$  and  $h_2$  be the base and height of  $\Delta PQR$

$\therefore \frac{1}{2} b_1 h_1 = \frac{1}{2} b_2 h_2$

$\therefore b_1 h_1 = b_2 h_2$

This does not necessarily mean that the base and height of the two triangles are correspondingly equal.

Hence, the question cannot be answered using both the statements together.

Hence, **option 4**.

30. Let A's salary and expenditure be  $3x$  and  $4y$ .

Let B's salary and expenditure be  $4x$  and  $5y$ .

$\therefore$  A's and B's savings are  $(3x - 4y)$  and  $(4x - 5y)$  respectively.

**Using statement I alone,**

$4x - 5y = 0.25(4x)$

$\therefore 3x = 5y$

We can find the ratio of savings using this.

$\therefore$  Statement I alone is sufficient to answer the question.

Hence, **option 1**.

31. Let  $x$  be the average height of the class and let  $n$  be the number of students.

**Using statement I alone,**

$\frac{nx - 56}{n - 1} = x - 1$

$$\therefore nx - 56 = nx - n - x + 1$$

$$\therefore n + x = 57 \quad \dots (i)$$

But this is not sufficient to answer the question. Hence, the question cannot be answered using statement I alone.

**Using statement II alone,**

$$\frac{nx - 42}{n - 1} = x + 1$$

$$\therefore nx - 42 = nx + n - x - 1$$

$$\therefore x - n = 41 \quad \dots (ii)$$

This is also not sufficient to answer the question. Hence, the question cannot be answered using statement II alone.

**Using both the statements together,**

From statement I and II we get,

$$n + x = 57 \text{ and}$$

$$x - n = 41$$

$$x = 49$$

Hence, the question can be answered using both the statements together.

Hence, **option 3.**

32. If ">" denotes the taller than relation, we have Ram > Shyam and Vikram > Jay

**Using statement I alone,**

It is given that Ram is tallest, but still we cannot comment that whether Shyam or Jay is the shortest one.

Hence, the question cannot be answered using statement I alone.

**Using statement II alone,**

It is given that Shyam > Vikram

$\therefore$  We have the following relation: Ram > Shyam > Vikram > Jay.

$\therefore$  Jay is the shortest.

Hence, statement II is sufficient to answer the question.

Hence, **option 2.**

33. Let the sales in July be 300

$$\therefore \text{Sales in September} = 200$$

$$\text{Sales in November} = 200 \times 1.05 = 210$$

$$\therefore \text{Required percentage increase} = \frac{210 - 300}{300} \times 100$$

$$= -30\%$$

Hence, **option 3.**

34.  $15x - \frac{2}{x} > 1$

$$\therefore 15x - \frac{2}{x} - 1 > 0$$

$$\therefore 15x^2 - 2 - x > 0$$

$$\therefore \left(x + \frac{1}{3}\right) \left(x - \frac{2}{5}\right) > 0$$

$$\therefore x < -\frac{1}{3} \text{ or } x > \frac{2}{5}$$

The correct answer is not there in the options.

35. Let there be  $x$  liters of 30% alcohol solution.

$$\therefore x(0.3) + 40(0.6) = (40 + x)0.5$$

$$\therefore x = 20$$

Hence, **option 2.**

36. Radius of wire = 0.05 cm

As the volume of silver in the wire is 66 cc,

$$66 = \pi \times (0.05)^2 \times l$$

$$\therefore l = 8400 \text{ cm}$$

$$\therefore l = 84 \text{ m}$$

Hence, **option 1.**

37. Length of first train = 0.108 km

Length of second train = 0.112 km.

Let the speed of second train be  $x$ .

As the trains are moving towards each other,

$$\frac{0.108 + 0.112}{50 + x} = \frac{6}{60 \times 60}$$

$$\therefore x = 82 \text{ km/hr.}$$

Hence, **option 4.**

$$38. \sqrt{\frac{(8R)^2}{4}} = Q$$

$$\therefore Q = \sqrt{\frac{64R^2}{4}}$$

$$Q = 4R$$

Hence, **option 2.**

39. Let the original length, breadth and height of the room be  $3x$ ,  $2x$  and  $x$  respectively.

The area of the four walls =  $2[(\text{length} \times \text{height}) + (\text{breadth} \times \text{height})]$

$$= 2(3x^2 + 2x^2) = 10x^2$$

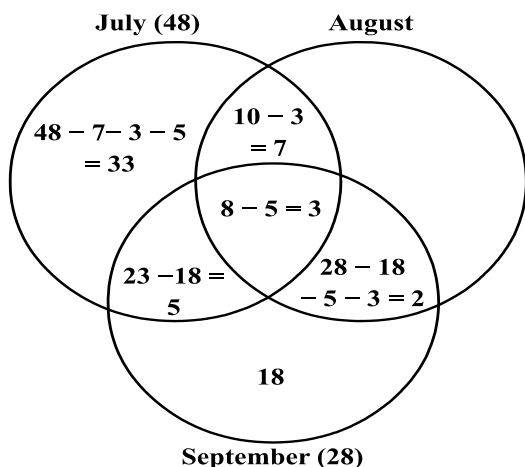
The new length, breadth and height are  $6x$ ,  $x$  and  $x/2$  respectively.

$$\therefore \text{The new area of walls} = 2 \left[ 3x^2 + \frac{x^2}{2} \right] = 7x^2$$

$$\begin{aligned}\therefore \text{Percentage decrease in area} &= \frac{10x^2 - 7x^2}{10x^2} \times 100 \\ &= 30\%\end{aligned}$$

Hence, **option 4**.

40. The following figure gives the distribution of the people who read "Golmal" magazine in the given three months.



As 24 people did not read the magazine in any of the three months, 76 people read it in at least one of the three months.

$$\therefore 76 - 48 - 18 - 2 = 8 \text{ people read it only in August.}$$

$\therefore$  Number of people who read it exactly for two consecutive months (i.e. July and August but not September, and August and September but not July) = 7 + 2 = 9

Hence, **option 2**.

41. Let A, B, C and D have  $a$ ,  $b$ ,  $c$  and  $d$  chocolates respectively.

A gives  $b$ ,  $2c$  and  $3d$  number of chocolates to B, C and D respectively.

$\therefore$  At the end of 1<sup>st</sup> iteration the number of chocolates with each of them are,

A	B	C	D
$a - b - 2c - 3d$	$2b$	$3c$	$4d$

D gives  $1/8^{\text{th}}$  of his chocolates. i.e.  $(d/2)$  chocolates to B

$\therefore$  At the end of 2<sup>nd</sup> iteration

A	B	C	D
$a - b - 2c - 3d$	$\left(2b + \frac{d}{2}\right)$	$3c$	$\frac{7d}{2}$

Now, note that D has no further transaction and has 35 chocolates at the end

$$\therefore \frac{7d}{2} = 35$$

$$\therefore d = 10$$

$\therefore$  Option 3 and 4 can be eliminated.

Now, using  $d = 10$ , we check for the options 1 and 2.

Only the number of chocolates in option 1 satisfies all the given conditions.

Hence, **option 1**.

42.  $201 = 09 + 102 + 90$

$\therefore$  The lowermost number is the sum of the other three numbers.

$$\therefore \text{Missing number} = 07 + 203 + 70 = 280$$

Hence, **option 1**.

43. Consider 1<sup>st</sup> letter of each term of the series.

T + 2 alphabets = V, V + 2 alphabets = X

$\therefore$  The first letter of the missing term is X + 2 alphabets = Z

Consider 2<sup>nd</sup> letter of each term of the series.

B + 3 alphabets = E, E + 3 alphabets = H

$\therefore$  H + 3 alphabets = K

Consider 3<sup>rd</sup> letter of each term of the series.

L + 4 alphabets = P, P + 4 alphabets = T

$\therefore$  T + 4 alphabets = X

Consider last letter

D + 5 alphabets = I, I + 5 alphabets = N

$\therefore$  N + 5 alphabets = S

$\therefore$  Missing term = ZKXS

Hence, **option 3**.

44. Only one statement of each person is true.

$\therefore$  Only one of Sachin's statements is true.

Assume that Sachin's first statement is true.

If Sachin got the top score then the first statements of both Brian and Ricky turn out to be false.

However, since Sachin got the top score the second statements of both Brian and Ricky also turn out to be false.

This is not possible as both the statements of a person cannot be false.

So Sachin's first statement is false.

Hence, Ricky was second. Hence Brian's second statement is false. Hence, Brian got the top score and Sachin was third.

Hence, **option 1**.

45. Let the number of people who drink tea =  $6x$

$\therefore$  The number of people who drink coffee =  $4x$  and  $2x$  people drink both tea and coffee.

$\therefore$  Number of people who drink neither =  $2x$   
 $\therefore$  Number of people who drink only tea =  $6x - 2x = 4x$   
 $\therefore$  Number of people who drink only coffee =  $4x - 2x = 2x$   
 $\therefore 4x + 2x + 2x + 2x = 60$   
 $\therefore x = 6$   
 $\therefore$  No of people who drink both tea and coffee =  $2x = 2 \times 6 = 12$   
 Hence, **option 2**.

46. At  $n$  o'clock, the clock strikes  $n$  times. It takes 6 seconds to strike thrice. Assuming that the strikes are instantaneous, there are 3 seconds between two strikes.

Hence, to strike 9 times there will be 8 striking intervals.

Hence, time taken to strike 9 times at 9 o'clock =  $8 \times 3 = 24$  seconds.

Hence, **option 1**.

Note: If the strikes are not instantaneous the answer will depend on the length of interval of the strike.

47. E-1, E-2, E-3 are writing assignments.

It is given that the digit in their name and the order of their starting and completing the assignment is certainly not the same.

This means that E-1 was neither the first to start and nor the first to end.

Student	Start
E-1	2/3
E-2	3/1
E-3	1/2

Now, the last student to start is the first to finish.

Only, E-1 or E-2 can be the last to start.

However, E-1 cannot be the first to finish.

$\therefore$  E-2 was the last to start and first to finish.

$\therefore$  E-1 was the second to start and last to finish.

$\therefore$  E-3 was the first to start and second to finish.

Hence, the table becomes,

Student	Start	End
E-1	2	3
E-2	3	1
E-3	1	2

E-3 starts writing first.

Hence, **option 3**.

48. From the table, E-1 is the last to complete the assignment.

Hence, **option 1**.

49. A, B, C – Don school

P, Q, R – Elite school

If "X > Y" denotes that X is brighter than Y then,

$Q > R$

$\therefore$  Q is duller than the Don School student who is brighter than A. The same student is brighter than C. So the student has to be B.

$\therefore B > Q > R$  and  $B > A$

$P > B > C$

From the last statement we get,

$P > B > C$ ,  $B > Q > R$  and  $B > A$

$\therefore$  P is brightest.

Hence, **option 2**.

50. Among the students from Elite School, R is the dullest.

Hence, **option 3**.

51. We have two possibilities.

**Case (i):** Rafael entered before Roger

Then we have:

10 students + Rafael + 5 students + Roger + 10  
 = 27 students

**Case (ii):** Roger entered before Rafael

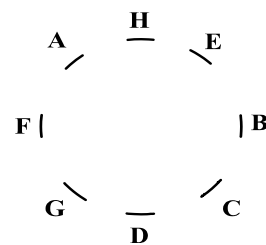
Then we have:

4 students + Roger + 5 students + Rafael + 4 students  
 = 15 students

Hence, there are two possible answers.

Hence, **option 4**.

52. From the given information we get the arrangement as



$\therefore$  Arijit is sitting to the immediate right of Himadri.

Hence, **option 1**.

53. Fredrik is sitting opposite Biplab.

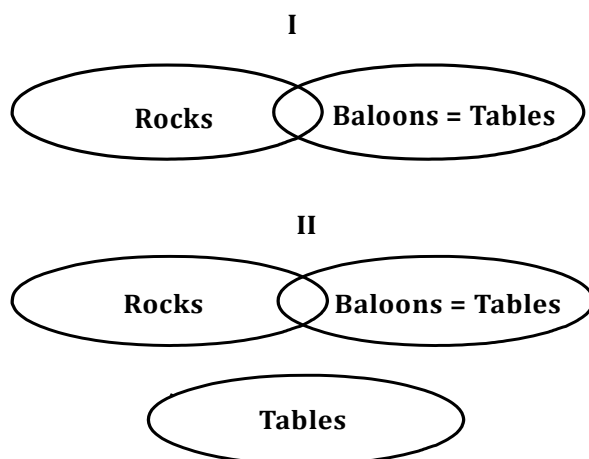
Hence, **option 3**.

54. Biplab is sitting to the immediate right of Chintan.

Hence, **option 2**.

55.





According to fig I, conclusions 1 & 3 are not valid.

According to fig II, conclusion 2 is not valid.

Hence, **option 4**.

56. From the given information we get the seating arrangement as,  
A/E B/D C B/D E/A  
 $\therefore$  C is sitting in the middle of the bench.  
 Hence, **option 2**.

57. A and E are sitting at the extreme ends of the bench.  
 Hence, **option 1**.

58. Commission earned by salesman D in 1994 = 29800  
 Commission earned by salesman A in 1994 = 24600  
 $\therefore$  The amount by which the commission earned by salesman D is more than that of A = 5200

$$\therefore \text{Required percentage} = \frac{5200}{24600} \times 100 \approx 21.1$$

Hence, **option 3**.

59. In 1993, commission earned by B = 28000  
 Total commission earned in 1993 = 146960  $\approx$  147000

$$\therefore \text{Required percentage} = \frac{28000}{147000} \times 100 \approx 19\%$$

The closest among the given options is 20.

Hence, **option 2**.

60. The number in the second row of the first column is 2 less than the square of the number in the first row of the same column.  
 $\therefore$  Missing number =  $8^2 - 2 = 64 - 2 = 62$   
 Hence, **option 2**.

61. From the given options, only option 4 has vol.5 to the right of vol.2.

Also, now we can check that all the conditions are satisfied by option 4.

Hence, **option 4**.

62. This question was camouflaged. The inference was given as main data and the questions stem required you to identify the premise (given in the answer options) based on which the given inference was drawn.

Option 2 identifies Marx as a non-German and hence can be eliminated.

Option 4 provides incomplete data and hence can be eliminated as a premise for the inference.

Option 1 implies that All Germans are idealist philosophers.

Only Option 3 can be a premise that allows us to arrive at the inference given in the questions stem.

Hence, **option 3**.

63. Let the lengths of the two candles be  $h$ .

Rate of burning of the thicker candle =  $h/6$  per hour

Rate of burning of the thinner candle =  $h/4$  per hour

Let Ramaswami study for  $t$  hours.

$\therefore$  From the given information we get,

$$h - (h/6)t = 2[h - (h/4)t]$$

$$\therefore 1 - t/6 = 2 - t/2$$

$$\therefore t = 3$$

Hence, **option 2**.

64. Let the initial fraction be  $\frac{2x}{3x}$ .

$$\therefore \frac{2x - 6}{3x} = \left(\frac{2}{3}\right) \left(\frac{2x}{3x}\right)$$

$$\therefore \frac{2x - 6}{3x} = \frac{4}{9}$$

$$\therefore x = 9$$

Hence, numerator of the original fraction =  $2x = 18$

Hence, **option 3**.

65. Best way to solve this question is by evaluating options.

**Consider Option 1:**

$$X = 3 \text{ and } Y = 6$$

Hence, he wanted to withdraw 306 paise but he got 603 paise.

$$\text{But } 603 - 20 \neq 2 \times 306$$

Hence, option 1 is incorrect.

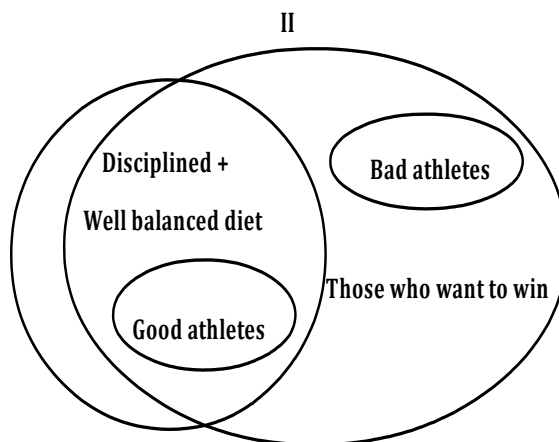
**Consider Option 2:**

$$\text{We get } X = 26 \text{ and } Y = 53$$

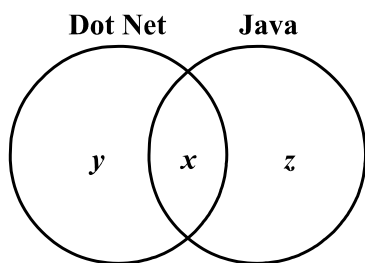
Hence, he should have got 2653 paise but he got 5326 paise.

Note that  $2(2653) = 5306$  which is same as  $(5326 - 20)$   
 Hence, option 2 satisfies the given conditions.  
 Hence, **option 2**.

66. If one takes out 3 pieces, at least two of them will be of the same color.  
 Hence, a pair will be formed.  
 Hence, 3 pieces must be taken out.  
 Hence, **option 4**.

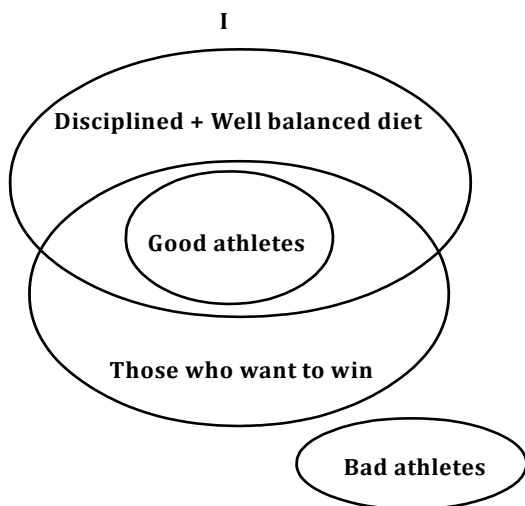


67.



From the data given  
 $x + y + z = 1000$   
 $x + y = 750$   
 $x + z = 450$   
 $\therefore x = (x + y) + (x + z) - (x + y + z)$   
 $= 450 + 750 - 1000$   
 $= 200$   
 Hence, **option 2**.

68.



Options 1 and 4 are true according to figure I but false according to figure II.  
 According to figure I and II, option 3 is not necessarily true.  
 Option 2 is true in both the figures.  
 Hence, **option 2**.

69. The triangle is symmetric across a line passing through the middle of the triangle.  
 Hence, the missing letter in third row should be 8.  
 From the given options only option 2 has 8.  
 We can further verify that option 2 is correct by seeing that the triangle formed by substituting the values is symmetric.  
 Hence, **option 2**.

70.  $17 = \frac{17x}{1-x}$

$\therefore (1-x) = x$

$\therefore x = \frac{1}{2}$

$\therefore 2x^2 = 2\left(\frac{1}{2}\right)^2 = \frac{1}{2}$

Hence, **option 4**.

111. The following extract, "We are able to see in literary works the perspective...reforming canons and interpreting literature...begun to change" would imply that a fresh perspective has arrived in literary criticism. Further, (as per the passage) women are now reforming the canons of interpreting literature. This validates option 2 as our correct answer option.  
 Option 1 is the literary criticism that occurred before.  
 The works of early twentieth-century writers have not been studied in any detail. We can eliminate option 3.

No feminist book has been cited in the passage. Eliminate option 4.

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

- 112.** The passage mentions the modernist's view that the deepest fight for 200 years has been the fight for women's independence. This would imply that prior to that women's issues would not have been authored in any great detail in literature. This validates option 3. Option 1, while correct does not adequately answer the question stem.

The passage does not mention the modernists to be ineffectual- nor can this be inferred. Eliminate option 2. Hence, the correct answer is **option 3**.

- 113.** The author mentions that literary criticism has begun to "catch up" with women's revolt against male domination in literature. They (women) are bringing a new perspective and reforming the canons of literary criticism. The author has not criticised this in the slightest. Therefore, this validates option 4.

The author has not expressed any ambivalence over this. Eliminate option 1.

The author has not expressed any antagonism or indifference. We can eliminate options 2 and 3.

Hence, the correct answer is **option 4**.

- 114.** The author has expressed his opinion of literature only in terms of issues related to female emancipation- through the quotation of Virginia Woolf. Eliminate option 2.

Literature has not been transformed- rather literary criticism has. Eliminate option 3.

The search for equality between the sexes is the highlight or the principal feature of the passage.

Hence, the correct answer is **option 1**.

- 115.** The vowel "a" in anthropologist means that the article preceding it should be "an" and not "a". We can eliminate option 1.

"The" in option 2 renders it incorrect.

"As" in option 3 renders it incorrect.

Hence, the correct answer is **option 4**.

- 116.** An apostrophe is used to indicate possession.

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

- 117.** A declarative and imperative sentence ends in a period. Hence, the correct answer is **option 4**.

- 118.** Two clauses- a subordinate and the main- are connected by a comma.

Hence, the correct answer is **option 3**.

- 119.** Two independent clauses are connected with a semi-colon.

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

- 120.** The correct proverb is, "Let the sleeping dogs lie". Options 1, 2 and 3 are not correct proverbs.

Hence, the correct answer is **option 4**.

- 121.** The correct proverb relates to, "A fool and his money are parted easily".

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

- 122.** The correct meaning for the idiom, "You are the bomb" is that you are exceptional and/or wonderful.

Hence, the correct answer is **option 3**.

- 123.** A "flighty" person is one who is "indecisive and irresponsible".

The other options do not convey the meaning of a flighty person.

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

- 124.** "To take the enemy down" means "to kill the enemy".

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

- 125.** "Dime a dozen" means "anything that is common and easy to get".

Hence, the correct answer is **option 3**.

- 126.** "Throw the baby out with the bathwater" means to "throw out the good things with the unwanted".

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

- 127.** "Bark up the wrong tree" means to "make the wrong choice".

Hence, the correct answer is **option 4**.

- 128.** The correct word for the blank will be "rode".

"Ride" would be incorrect tense.

"Road" and "Rhode"- if used - will make the sentence nonsensical.

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

- 129.** The correct word for the blank would be "prevent"- as in one prevents further heat loss.

The other options if used would render the sentence logically incorrect.

Hence, the correct answer is **option 4**.

- 130.** When we mention inflation- the word "high" is more apt than "large", "great" or "tall".

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

- 131.** A boat consists of "sails" which help to propel the boat. "Sales", "salies" as well as "sells" are incorrect usages contextually.

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

132. The correct word contextually is “further”.  
‘Faster details’ would be incorrect usage.  
“Farther” would imply ‘far away’ (in terms of distance) which is contextually incorrect.  
“Furthur” is an incorrect spelling of the word “further”.  
Hence, the correct answer is **option 2**.
133. A baby deer is called a “fawn”.  
Hence, the correct answer is **option 2**.
134. Option 1 is awkward with ‘gift’ and ‘gifting’.  
Option 3 is incorrect since the words in the two blanks are contradictory.  
Option 4 is incorrect since the word ‘thing’ does not match the adjective ‘greatest’.  
The ‘greatest discovery’ can be that ‘a human being can alter his life by altering his attitude’.  
Hence, the correct answer is **option 2**.
135. The key word in this sentence is “mind-lift”. Its unusual structure is parallel to the word “face-lift”. Thus, when it comes to staying young, a mind-lift (that is, rejuvenating your mind) is better than a face-lift.  
Hence, the correct answer is **option 1**.
136. The author has used antithesis, a figure of speech in which contrasting or opposite words are used for emphasis. Thus, none are so ‘empty’ as those who are ‘full’ of themselves. The statement is actually a criticism of people who are full of themselves.  
Hence, the correct answer is **option 1**.
137. Option 1 is not logical and can be eliminated.  
Options 2 and 3, though logical, are too simplistic.  
Option 4 brings out the true meaning of the sentence, since it implies that unhappy customers, who point out your faults, enable you to learn from your mistakes, and thereby lead to an overall improvement.  
Therefore, unhappy customers are your greatest source of learning.  
Hence, the correct answer is **option 4**.
138. “Eulogize” means ‘to praise highly’. The antonym for eulogize is ‘criticize’, since it has the opposite meaning.  
Hence, the correct answer is **option 2**.
139. “Pedantic” means ‘overly concerned with minute details or formalisms, especially in teaching; excessively concerned with minor details or rules’. It implies being finicky in teaching or learning.  
Options 1 and 4 are unrelated to this context.  
Option 2 is incorrect since the term teaching methodology (the method of teaching) is too broad.  
Hence, the correct answer is **option 3**.
140. “Pyrophobia” is ‘an abnormal fear of fire’.  
Hence, the correct answer is **option 4**.
141. A kangaroo word is a word that contains a smaller word that is actually a synonym of itself.  
‘Masculine’ contains the word ‘male’, both of which are synonymous.  
Hence, the correct answer is **option 1**.
142. “Respite” means ‘an interval of relief or rest’ and contains the word ‘rest’.  
Hence, the correct answer is **option 2**.
143. The word ‘weight’ completes the word ‘paper’ to form the word ‘paperweight’, and begins the word ‘lifter’ to form ‘weightlifter’.  
Hence, the correct answer is **option 2**.
144. Outshine, outnumber and outrun are meaningful words.  
‘Out’ cannot be coupled with ‘bug’.  
Hence, the correct answer is **option 3**.
145. Newsletter, newsstand and newspaper are meaningful words.  
‘News’ cannot be coupled with ‘week’. (Although it may sound familiar, it is a proper noun and not a dictionary word.)  
Hence, the correct answer is **option 2**.
146. The noun ‘party’ has to be preceded by the preposition ‘at’ – at the party.  
Hence, the correct answer is **option 3**.
147. The correct idiom is ‘as cool as a cucumber’, meaning ‘extremely calm’.  
Hence, the correct answer is **option 1**.
148. The correct idiom is ‘as fresh as a daisy’, meaning ‘fresh and alert’.  
Hence, the correct answer is **option 1**.
149. “Consort” refers to ‘the spouse of a reigning monarch’. It is similar to ‘spouse’ and ‘partner’. The word ‘clear’ is clearly unrelated to the other words.  
Hence, the correct answer is **option 4**.
150. “Nerd” means ‘a boring or unpopular person, especially one obsessed with a nonsocial hobby or pursuit’ (Eg. a computer nerd). Therefore, a nerd is an uninteresting person.  
Hence, the correct answer is **option 2**.