

Directions of Test

Test Name	Placement Goldman Sachs 01 (R1)	Total Questions	66	Total Time	90 Mins
-----------	---------------------------------	-----------------	----	------------	---------

Section Name	No. of Questions	Marks per Question	Negative Marking
Numerical Computations	8	5	1/3
Numerical Reasoning	12	5	1/3
Logical Reasoning	12	5	1/3
Abstract Reasoning	12	5	1/3
Diagrammatic Reasoning	12	5	1/3
Verbal Usage & Reading Comprehension	10	5	1/3

Section : Numerical Computations

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 1

A ten digit number is such that all its digits are distinct. If the number is added to its reverse (ten digit number) then also we get a ten digit number. Then the number 9 cannot be:

- A) The rightmost digit B) The leftmost digit ☒ C) Both [a] and [b] D) None of these

Explanation:-

9 cannot be the leftmost or rightmost digit. (As the sum of the even digit number and it's reverse will become an eleven digit number).

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 2

How many three digit numbers are of the form xyz with $x < y$, $z < y$ and $x \neq 0$?

- A) 335 ☒ B) 240 C) 340 D) None of these

Explanation:-

Since $x < y \Rightarrow x \geq 1$ and $y \geq 2$.
If $y = n$, then x can take the values from 1 to $n - 1$ and z can take the values from 0 to $n - 1$, thus for each value of y ($2 \leq y \leq 9$), x & z will have $n(n-1)$ values. Hence the three digit numbers of the form xyz are

$$= \sum_{n=2}^9 n(n-1) = \sum_{n=1}^9 n(n-1) \quad [\because \{1(1-1)=0\}]$$
$$= \sum_{n=1}^9 n^2 - \sum_{n=1}^9 n$$
$$= \frac{9(10)(19)}{6} - \frac{9 \times 10}{2} = 285 - 45 = 240$$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 3

$27^{54} - 13^{54}$ is atleast divisible by

- A) 424 ☒ B) 560 C) 575 D) 280

Explanation:- $a^n - b^n$ is divisible by $a - b$ and $a + b$ if n is even.

$27^{54} - 13^{54}$ is divisible by 40 and 14 i.e., by 560.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 4



Three pieces of weight $4\frac{1}{2}$ lbs., $6\frac{3}{4}$ lbs. and $7\frac{1}{5}$ lbs. respectively are to be divided into parts of equal weight. Further, each part must be as heavy as possible. If one such part is served to each guest, then what is the maximum number of guests that could be entertained?

- A) 54 B) 72 C) 20 ☒ D) 41

Explanation:-

We need to find H.C.F. of 4.5, 6.75, 7.2. Now $450 = 3^2 \times 5^2 \times 2$, $675 = 3^3 \times 5^2$, $720 = 2^4 \times 3^2 \times 5$. H.C.F. = $3^2 \times 5 = 45$. Hence the parts will be of size 0.45m. Hence number of guests is $(4.5+6.75+7.2)/.45 = 41$.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 5

Number of students who have opted for the subjects A, B and C are 60, 84 and 108 respectively. The examination is to be conducted for these students such that only the students of the same subject are allowed in one room. Also the number of students in each room must be same. What is the minimum number of rooms that should be arranged to meet all these conditions?

- A) 28 B) 60 C) 12 ☒ D) 21

Explanation:-

number of students who can be seated in each room is the HCF of 60,84 and 108 is 12.

Rooms needed to seat students of subject A = $60/12=5$

Rooms needed to seat students of subject B= $84/12=7$

Rooms needed to seat students of subject C $108/12=9$

Total number of rooms needed is $5+7+9=21$.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 6

If a, b are rationals and $a\sqrt{2} + b\sqrt{3} = \sqrt{98} + \sqrt{108} - \sqrt{48} - \sqrt{72}$, then the values of a, b are respectively

- ☒ A) 1, 2 B) 1, 3 C) 2, 1 D) 2, 3

Explanation:-

$$a\sqrt{2} + b\sqrt{3} = \sqrt{98} + \sqrt{108} - \sqrt{48} - \sqrt{72}$$

$$a\sqrt{2} + b\sqrt{3} = 7\sqrt{2} + 6\sqrt{3} - 4\sqrt{3} - 6\sqrt{2}$$

$$a\sqrt{2} + b\sqrt{3} = 1\sqrt{2} + 2\sqrt{3}$$

Comparing the coefficients, we get

$$a = 1, b = 2$$

So, Ans. is option A

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 7

Fine the value of the given expression:
$$\sqrt{\frac{\left(3\frac{1}{4}\right)^4 - \left(4\frac{1}{3}\right)^4}{\left(3\frac{1}{4}\right)^2 - \left(4\frac{1}{3}\right)^2}} = ?$$

- A) 5 ☒ B) $5\frac{5}{12}$ C) $5\frac{7}{12}$ D) $5\frac{11}{12}$

Explanation:-

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 8

Here, 64.5% of 800 + 36.4% of 1500 = $(?)^2 + 38$

- ☒ A) 32 B) 38 C) 42 D) 48

Explanation:-



Here, 64.5% of $800 + 36.4\%$ of $1500 = (?)^2 + 38$

$$\Rightarrow \frac{64.5}{100} \times 800 + \frac{36.4}{100} \times 1500 = (?)^2 + 38$$

$$\Rightarrow 64.5 \times 8 + 36.4 \times 15 = (?)^2 + 38$$

$$\Rightarrow 516 + 546 = (?)^2 + 38$$

$$\Rightarrow ?^2 = 516 + 546 - 38 = 1062 - 38$$

$$? = \sqrt{1024} = 32$$

Section : Numerical Reasoning

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 9

Anil purchases 100 articles at Rs. 50 each. He sells m of them at a profit of $m\%$ and the remaining at a profit of $(100 - m)\%$. What is the minimum profit Anil could have made on this transaction?

- ✓A) 2875 B) 2785 C) 2855 D) 2575

Explanation:- Total CP = $100 \times 50 = 5000$

Profit earned by selling m articles = $m\%$ of $50m$

Profit earned by selling remaining $(100 - m)$ objects = $(100 - m)\% \times 50 \times (100 - m)$.

We need to find the minimum possible value of $m\%$ of $50m + (100 - m)\% \times 50 \times (100 - m)$.

Or, we need to find the minimum possible value of $m^2 + (100 - m)(100 - m)$.

Minimum of $m^2 + 1000 + m^2 - 200m$

Minimum of $2m^2 + 10000 - 200m$

Minimum of $m^2 - 100m + 5000$

Minimum of $(m - 25)^2 + 2500$

This reaches minimum when $m = 25$.

When $m = 25$, the minimum profit made

$$= 25\% \times 50 \times 25 + 75\% \times 50 \times 75$$

$$= 62.5 + 2812.5 = 2875$$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 10

A cloth merchant calculated a profit of 1% by offering some discount on his marked price but he later found that he made a loss of 1% because of the faultiness in a meter scale. What is the actual length of the scale?

- A) 98.98 cm B) 99.09 cm C) 102.78 cm ✓D) 102.02 cm

Explanation:- Let Rs. 100 be the cost price of 1 meter cloth, so 1 cm cloth would cost Rs. 1

And since expected profit = 1% which means selling price becomes Rs. 101 equivalent to 101cm cloth.

Now actual length of cloth will be different, let say = x cm

And there is a loss of 1%, keeping the selling same.

$$\text{So, } x - 1\% \text{ of } x = 101$$

$$x = 101/99 \times 100 = 102.02 \text{ (approximately)}$$

DIRECTION for the question: Solve the following question and mark the best possible option.

Question No. : 11

In the final examination, Bishnu scored 52% and Asha scored 64%. The marks obtained by Bishnu is 23 less, and that by Asha is 34 more than the marks obtained by Ramesh. The marks obtained by Geeta, who scored 84%, is

- ✓A) 399 B) 417 C) 439 D) 357

Explanation:- Bishnu scored 52% and Asha scored 64%. Difference between their actual marks = $23 + 34 = 57$

Difference in their percentages = 12%

So 12% of Total = 57

$$\text{Total} = 57 \times 100/12$$

$$\text{Score of Geeta} = (57 \times 100/12) \times 84/100 = 399$$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 12



Two cars A and B are travelling on the same road towards each other. If car A is travelling at a speed of 120 km/h and car B is travelling 15% slower than A, how much time will it take the cars to meet, if the initial distance between the two is 668.4 km and car A started to drive one and a half hours before car B started ?

- A) 1 hour and 30 minutes B) 2 hours ☒ C) 2 hours' and 12 minutes D) 3 hours and 15 minutes

Explanation:- Acc to Q, as car a started 90 minutes before, it will cover 180 km in that time.

So new dist = $668.4 - 180 = 488.4$

Speed A = 120

Speed B = 102

Time reqd = $488.4 / (120 + 102) = 2\text{h } 12\text{ minutes}$.

DIRECTIONS for the question: Choose the option which is most **Similar** in meaning of the underlined word as used in the context of the sentence.

Question No. : 13

Lethargic: Bullfrogs became lethargic in the cold night weather.

- ☒ A) Sluggish B) Supplementary C) Burnish D) Frolic

Explanation:- Lethargic means lazy; inactive ; sluggish.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 14

A can run one full round of a circular track in 6 min and B can run one full round in 15 min. If both A and B start simultaneously from the same starting point and in the same direction, find how many times would they have met in the time B has completed 10 rounds when running in same direction?

- A) 35 times B) 25 times ☒ C) 15 times D) 10 times

Explanation:- Let the length of the track is 90m. So the speed of A = 15m /min and speed of B is 6m/min. They will meet after every $90/9 = 10$ min. Now B will take $15 \times 10 = 150$ minutes to cover 10 rounds and in this time they will meet $150/10 = 15$ times.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 15

A granite stone has been purchased to build the kitchen platform and dining area of Mr. Kumar's bungalow. The cost of the stone varies directly with square of its weight. The stone broke into four parts whose weights are in the ratio of 2:4:7:11. If the granite stone had broken into four equal parts of weight then it would have led to a loss of Rs. 73600. What is the actual cost of the original granite stone (unbroken)?

- A) 5,18,400 B) 2,30,400 ☒ C) 9,21,600 D) 4,66,560

Explanation:- Here $C = k \times w^2$, where k is the constant of proportionality.

Let the weights of the broken pieces are 2, 4, 7 and 11 units. Therefore, the total weight is 24 units. The cost of these broken parts is 4k, 16k, 49k and 121k respectively. Sum of costs of all broken piexes = $4k + 16k + 49k + 121k = 190k$

Cost of unbroken stone = $24^2 \times k = 576k$

If the stone is broken in equal parts of 6 units each then total cost will be $36k \times 4 = 144k$.

Given that $190k - 144k = 73600 \Rightarrow 46k = 73600$

$$\Rightarrow 576k = \frac{73600}{46} \times 576 = \text{Rs } 921600.$$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 16

The goods train between Bhilai to Lucknow without rakes can go upto the speed of 72km/hour, and the speed gets diminished by the quantity that varies as the square root of the number of wagons attached. If it is known that with 4 wagons the speed is 56 km/hour, the greatest number of wagons with which the engine can just move is:

- A) 84 B) 144 C) 56 ☒ D) 80

Explanation:- Here the reduction in speed = $k\sqrt{n}$, where k is the constant of proportionality and n is the number of wagons attached.

Now $16 = k\sqrt{4} \Rightarrow 2k = 16 \Rightarrow k = 8$

Therefore, the reduction in speed = $8\sqrt{n}$



If the speed of the engine becomes zero, then $72 = 8\sqrt{n} \Rightarrow \sqrt{n} = 9 \Rightarrow n = 81$.

As we want the engine to move, therefore, the maximum wagons that it can carry is $81 - 1 = 80$.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 17

In a group of 10 students, the mean of the lowest 9 scores is 42 while the mean of the highest 9 scores is 47. For the entire group of 10 students, the maximum possible mean exceeds the minimum possible mean by

- A) 3 B) 5 ☒ C) 4 D) 6

Explanation:- Difference between highest number – Lowest number = $9 \times 47 - 9 \times 42 = 45$

Maximum possible value of highest number = $42 + 45 = 87$

Minimum possible value of lowest number = $47 - 45 = 2$

So, Maximum possible mean = $[42 \times 9 + 87]/10 = 46.5$

Minimum possible mean = $[47 \times 9 + 2]/10 = 42.5$

Required difference = $46.5 - 42.5 = 4$

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 18

In a cricket team of 11 players, the average age is 28 years. Out of these, the average ages of three groups of three players each are 25 years, 28 years and 30 years respectively. If in these groups, the captain and the youngest player are not included and the captain is eleven years older than the younger player, then the age of the captain is

- A) 33 years B) 34 years ☒ C) 35 years D) 36 years

Explanation:- Total age of 11 players = (28×11) years = 308 years.

$C = Y + 11$ $C - Y = 11$ (i)

Total age of 9 players = $[(25 \times 3) + (28 \times 3) + (30 \times 3)]$ years = 249 years.

$C + Y = (308 - 249) = 59$ (ii)

From (i) and (ii), $C = 35$ yrs : Option C

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 19

An engineering firm is allotted the work of building a railway bridge in 100 days. The engineers estimate that the work requires 200 men working for 100 days to complete the project. However, due to meagre funds they are able to employ only 100 persons for first 40 days. After 40 days, total funds are released. How many men need to be employed now to complete the project in time?

- A) 298 persons B) 315 persons ☒ C) 267 persons D) 243 persons

Explanation:- Total work = $100 \times 200 = 20000$ manday's

ATQ. 100 men work for 40 days and x men for 60 days

$100 \times 40 + x \times 60 = 20000$

Solving this we get, $x = \text{approx } 267$. So option C.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 20

A part of 38,800 is lent out at 6% per six months. The rest of the amount is lent out at 5% per annum after one year. The ratio of interest after 3 years from the time when first amount was lent out is 5 : 4. Find the second part that was lent out at 5%.

- A) Rs. 26,600 ☒ B) Rs. 28,800 C) Rs. 7,500 D) Rs. 28,000

Explanation:- Let the amount lent out at 6% be x and the 5% be $(38800 - x)$

Thus 36% of x : 10% of $(38800 - x) = 5:4$.

$x = 10,000$

Thus for 5% is 28,800.



DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 21

If CAB is coded as 723 - 5 58 in a coded language then how will DAD be coded ?

- A) 4023 -5 4023 ☒ B) 4090 -5 4090 C) 1024 -5 1024 D) 1246 -5 1189

Explanation:- Looking at the options we conclude that (-5) is common in all choices so (A) will be coded as (-5). Now as C is 3 as per EJOTY, so squaring it makes 9 and further cubing it makes 729. Now subtract 6 to get 723. The same is applicable for B also which makes $2 \rightarrow 4 \rightarrow 64 - 6 \rightarrow 58$. Now $D \rightarrow 4 \rightarrow 16 \rightarrow 4096 - 6 \rightarrow 4090$.
Hence answer is 2nd option.

DIRECTIONS for the question: In the following question, a series is given with some blanks. Check which of the terms given in the options can replace the blanks so that the series becomes a logical one. Then the option which makes that possible will be the answer.

Question No. : 22

CMM, EOO, GQQ, _____, KUU

- A) GRR B) GSS ☒ C) ISS D) ITR

Explanation:-
The first alphabet of the series moves 2 places ahead, i.e. $G + 2 = I$. The second and the third alphabets also move two places ahead in the same manner, i.e. $Q + 2 = S$.
So, the answer is ISS.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 23

P b 7 E N ? 2 L * e K W 8 \$ = 5 J D ÷ V 6 F G @ 3 C R.

How many such letters are there in the above series each of which is not immediately preceded by a symbol?

- A) 10 B) 9 C) 6 ☒ D) None of these

Explanation:- P b 7 E N ? 2 L * e K W 8 \$ = 5 J D ÷ V 6 F G @ 3 C R.
Pb,7E,EN,2L,eK,KW,5J,JD,6F,FG,CR 11 possibilities are there

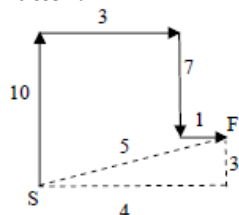
DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 24

Shiva walks 10 km towards North and then turns right. After walking 3 km he again turns right and walks 7 km. Now he turns left and walks 1 km. How far is he from the starting point ?

- A) 10 km B) 7 km C) 20 km ☒ D) 5 km

Explanation:-



$$\sqrt{4^2 + 3^2} = 5$$

Hence answer is option 4.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 25

If P - Q means Q is son of P,
P × Q means P is brother of Q,



$P \div Q$ means Q is sister of P and

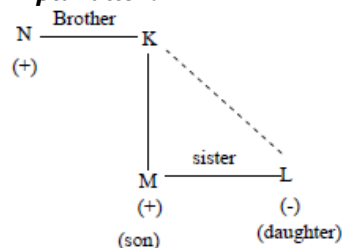
$P + Q$ means P is mother of Q ,

which of the following is definitely true about $N \times K - M \div L$?

A) K is father of L and M ☒ B) L is daughter of K and niece of uncle N

C) K is father of L and M - his son and daughter respectively D) M is uncle of K's brother N

Explanation:-



$$N \times K - M \div L$$

$$M \div L \rightarrow M \text{ is sister of } L$$

$$N \times K \rightarrow N \text{ is Brother of } K.$$

$$K - M \rightarrow M \text{ is son of } K$$

Hence answer is option 2.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 26

If 1st June 2013 is Saturday then 1st June 1981 is _____.

☒ A) Monday B) Saturday C) Sunday D) Thursday

Explanation:- We know that year that have same calender have interval of +6 years, +11 years, +11 years.

So, 1981 have same calender year as 1987, 1998, 2009, 2015.

Now, number of days between 1st June 2015 and 1st June 2013 = 365 + 365.

Again, number of odd days in a non-leap year = 1.

\therefore Number of odd days from 1st June 2013 to 1st June 2015 = 2.

Hence, 1st June 2015 = 1st June 1981 = Monday.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 27

The minute and the hour hand of a watch meet every 65 min. How much does the watch lose or gain time?

☒ A) 25 sec B) 27 sec C) 27.16 sec D) 30 sec

Explanation:-

In 60 min, the hour hand moves through an angle of 30° .

\therefore In 65 min, the hour hand will move through an angle of $\frac{30}{60} \times 65 = 32.5^\circ$

In 60 min, the minute hand moves through an angle of 360° .

\therefore In 65 min, the minute hand moves through an angle of $\frac{360}{60} \times 65 = 390^\circ + 30^\circ$

\Rightarrow Difference of the angles made by the hour hand and the minute hand = 2.5 (In 65 min)1

Now, an angle of 30° is made by the hour hand and the minute hand in 5 min.

\therefore An angle of 2.5° is made by the minute hand in

$$\frac{5}{30} \times 2.5 \text{ min, i.e. } \frac{25}{6} \text{ min, i.e. } 25 \text{ sec}$$

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 28

Eight adjacent offices completely enclose a circular central courtyard. The offices are numbered consecutively, beginning at one of the offices with 1 and proceeding clockwise to 8. Eight junior executives – J, K, L, M, N, O, P and R – are to occupy the offices, one to an office. The assignment of offices is subject to the following restrictions:

- (i) J is allowed first choice of any of the offices.
- (ii) K and P must be assigned to adjacent offices.
- (iii) L and P must be assigned to adjacent offices.
- (iv) M and O must be assigned to adjacent offices.
- (v) M and N cannot be assigned to adjacent offices.



- (vi) O is assigned to office 2 unless J chooses it; in that case, O will be assigned to office 3.
(vii) K is assigned to office 7 unless J chooses it; in that case, K will be assigned to office 5.

Which of the following is an assignment of executives to offices, beginning with office 1 and proceeding consecutively to office 8, that conforms to the restrictions above?

- ✓A) J, O, M, R, L, P, K, N B) J, R, O, M, L, P, K, N C) M, O, N, K, P, L, R, J D) M, O, R, J, L, K, P, N

Explanation:-

K is assigned to office 7 unless J chooses it, so options 3 and 4 are rejected. O is assigned to office 2 unless J chooses it. Hence option 2 is rejected. So only option 1 satisfies the given conditions.

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 29

Eight adjacent offices completely enclose a circular central courtyard. The offices are numbered consecutively, beginning at one of the offices with 1 and proceeding clockwise to 8. Eight junior executives – J, K, L, M, N, O, P and R – are to occupy the offices, one to an office. The assignment of offices is subject to the following restrictions:

- (i) J is allowed first choice of any of the offices.
(ii) K and P must be assigned to adjacent offices.
(iii) L and P must be assigned to adjacent offices.
(iv) M and O must be assigned to adjacent offices.
(v) M and N cannot be assigned to adjacent offices.
(vi) O is assigned to office 2 unless J chooses it; in that case, O will be assigned to office 3.
(vii) K is assigned to office 7 unless J chooses it; in that case, K will be assigned to office 5.

If J chooses office 8, which of the following must be true?

- ✓A) L is assigned to office 5 B) M is assigned to office 1 C) M is assigned to office 3 D) N is assigned to office 1

Explanation:-

If J goes to office 8, then K will take position 7, P will take 6 and L will take position 5.

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 30

Eight adjacent offices completely enclose a circular central courtyard. The offices are numbered consecutively, beginning at one of the offices with 1 and proceeding clockwise to 8. Eight junior executives – J, K, L, M, N, O, P and R – are to occupy the offices, one to an office. The assignment of offices is subject to the following restrictions:

- (i) J is allowed first choice of any of the offices.
(ii) K and P must be assigned to adjacent offices.
(iii) L and P must be assigned to adjacent offices.
(iv) M and O must be assigned to adjacent offices.
(v) M and N cannot be assigned to adjacent offices.
(vi) O is assigned to office 2 unless J chooses it; in that case, O will be assigned to office 3.
(vii) K is assigned to office 7 unless J chooses it; in that case, K will be assigned to office 5.

P could be assigned to which of the following offices?

- A) 1 B) 2 C) 3 ✓D) 4

Explanation:-

Among the options 'P' can take either 8 or 6, in case K is at 7 or positions 6 or 4 in case K is at 5. Only 4 is there in the options.

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 31

Six people- Rohit, Suneet, Deepak, Vikas, Kanak and Manick-were all born on the same day of the year, but each was born in a different year, during a single six-year period.

- I. Rohit is older than Deepak
II. Suneet is older than both Vikas and Kanak
III. Manick is 2 years older than Vikas
IV. Rohit was born either in 1962 or 1963
V. The oldest member of group was born in 1960

If Manick is the oldest of the group, then which of the following must be true?

- A) Deepak was born in 1964 B) Rohit was born in 1962 C) Vikas was born in 1961 ✓D) Suneet was born in 1961



Explanation:-

Since it is given to us that Manick is oldest, i.e born in 1960. We are also given that vikas is 2 years younger to him, i.e born in 1962. Also it is provided that Sumeet is older than Vikas, therefore Suneet must be born in 1961. Hence option 4.

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 32

Five men A, B, C, D and E read a newspaper. The one who reads first gives it to C. The one who reads last had taken from A. E was not the first or last to read. There were two readers between B and A. B passed the newspaper to whom?

- A) A ☒ B) C C) D D) E

Explanation:-

The one who reads first gives it to C, i.e C is fixed at position 2, Also the one who reads last has taken from A, Therefore A must be 4th, Further E is neither first nor last, Therefore he must be 3rd, Now E is neither in starting nor at end hence at 3rd. Now gap between B and A is 2, Hence he is at first. Therefore B must pass it to C, Hence option 2.

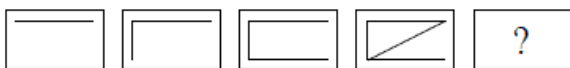
B-----C-----E-----A-----D

Section : Abstract Reasoning

DIRECTIONS for the question: Read the information given below and answer the question that follows.

Question No. : 33

Which figure will logically follow the four figures given below?



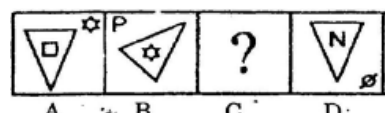
- ☒ A) B) C) D)

Explanation:-

First option is the only possible answer, the second option has one line extra, the third line is different in shape. The fourth option has same number of lines as figure in question. So option A.

DIRECTIONS for the question: In the question given below which one of the answer figures should come after the problem figures given, if the sequence were continued?

Question No. : 34



- A) B) C) ☒ D)

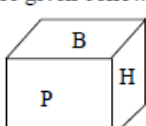
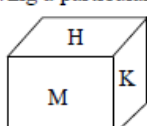
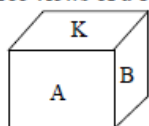
Explanation:-

In the answer figure 'P' should be inside and 'N' should be outside the triangle. Also the triangle rotates at 135°, 90°, 135°. Again the symbol outside the triangle moves in anticlockwise direction in each figure. That is true in case of option 4.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 35

Three views of a cube following a particular motion are given below:



What is the letter opposite to A?

- ☒ A) H B) P C) B D) M

Explanation:-

A, B, M and H are adjacent to K \Rightarrow P is opposite to K

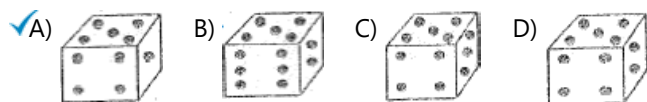
A, K, P and H are adjacent to B \Rightarrow M is opposite to B

\Rightarrow H is opposite A

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 36

Amongst the following figures, find the correct one; if it is known that the total number of dots on opposite faces of the cube shown is always 7

**Explanation:-**

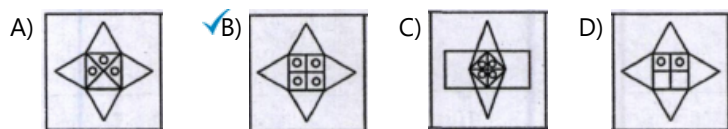
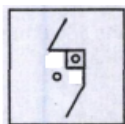
In 2nd figure, 5 and 2 are adjacent to each other, so its incorrect

In 3rd figure, 4 and 3 are adjacent to each other, so it is incorrect

In 4th figure, 5 and 2 are adjacent to each other, so its incorrect

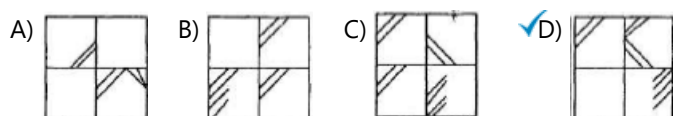
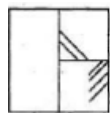
So only figure 1 is correct

DIRECTIONS for the question: In which of the given options is the problem figure Embedded/Hidden?

Question No. : 37**Explanation:-**

By carefully observing the question figure and answer choices, we can find that the given figure is hidden in the figure given in second choice.

DIRECTIONS for the question: In which of the given options is the problem figure Embedded/Hidden?

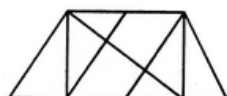
Question No. : 38**Explanation:-**

Observing carefully, you will find that only Figure 4 has the required figure hidden/embedded. Therefore, the correct answer is option 4.

DIRECTIONS for the question: Answer the following question as per the best of your judgment.

Question No. : 39

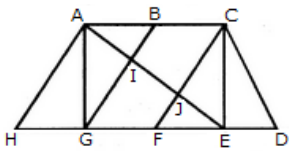
Find the number of triangles in the given figure.



A) 8 B) 10 C) 12 ☒ D) 14

Explanation:-

The figure may be labelled as shown.



The simplest triangles are AHG, AIG, AIB, JFE, CJE and CED i.e. 6 in number.

The triangles composed of two components each are ABG, CFE, ACJ and EGI i.e. 4 in number.

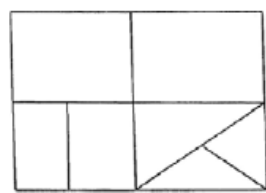
The triangles composed of three components each are ACE, AGE and CFD i.e. 3 in number.

There is only one triangle i.e. AHE composed of four components.

Therefore, There are $6 + 4 + 3 + 1 = 14$ triangles in the given figure.

DIRECTIONS for the question: Which of the following options is embedded in the problem figure?

Question No. : 40

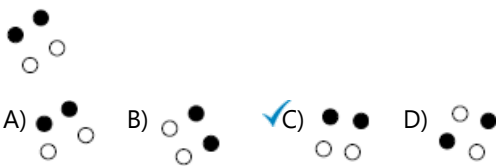


- ☒ A)
- B)
- C)
- D)

Explanation:- option figures 1, is the part of given question figure

DIRECTIONS for the question: Which of the given option gives the mirror image of the given problem figure?

Question No. : 41



- A)
- B)
- ☒ C)
- D)

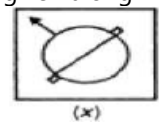
Explanation:-

Here, we have to find out the mirror image of the given, which comes out to be figure 3.

DIRECTIONS for the question: Answer the following question as per the best of your judgment.

Question No. : 42

In the following question, choose the correct mirror image of the figure (x) from amongst the four alternatives (a), (b), (c), (d) given along with it.



- A)
- B)
- ☒ C)
- D)

Explanation:-
Answer is 3rd option.

DIRECTIONS for the question: Answer the following question as per the best of your judgment.

Question No. : 43

Which one of the following collections of letters will look the same in mirror?

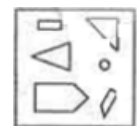

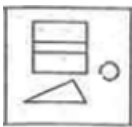

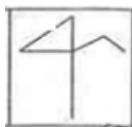
- A) O S H M I H O M B) V H R T R V H C) H I M O S T A ☒ D) A O V I V O A

Explanation:-
In the first three options R and S will change in their mirror images but in option D , all alphabets will look alike.

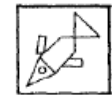
DIRECTIONS for the question: Which of the given options can be made, by combining all the parts given in the question?

Question No. : 44

Which of the answer figures includes the separate components found in the question figure?

- 
- A)
- B)
- ☒ C)
- D)

Explanation:-
All the components of question Figure are present in Answer figure (3)



Section : Diagrammatic Reasoning

DIRECTIONS for the question: Given an input line ; the machine arranges the words and numbers in steps in a systematic manner as illustrated afterwards : Study the pattern and answer the question that follows.

Question No. : 45

A word and number arrangement machine when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input:	By	Now	25	72	Sight	37	15	home
Step I:	Sight	by	Now	25	72	37	15	Home
Step II:	Sight	15	by	Now	25	72	37	Home
Step III:	Sight	15	Now	By	25	72	37	Home
Step IV:	Sight	15	Now	25	By	72	37	Home
Step V:	Sight	15	Now	25	Home	By	72	37
Step VI:	Sight	15	Now	25	Home	37	By	72

And Step VI is the last step of the rearrangement.

As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Input: Ask For Me 49 32 64 And 24

Which of the following will be Step III for the above input?

- A) me 24 ask for 49 32 64 and ☒ B) me 24 for ask 49 32 64 and C) me 24 for 32 ask 49 64 and
D) me 24 for 32 ask 49 and 64

Explanation:- In the first step, one word which comes last in the dictionary is placed at the first position and other terms are written in the same order.

In the second step, the lowest number is placed at the second position.

These two steps are repeated to rearrange the terms stepwise in third, fourth, fifth, sixth, seventh and eighth places. The process continues until the words are arranged in reverse alphabetical order at alternate positions and the numbers are arranged in ascending order, again at alternate positions.

Input:	ask	for	me	49	32	64	and	24
Step I:	me	ask	for	49	32	64	and	24
Step II:	me	24	ask	For	49	32	64	and
Step III:	me	24	for	ask	49	32	64	and

DIRECTIONS for the question: Given an input line ; the machine arranges the words and numbers in steps in a systematic manner as illustrated afterwards : Study the pattern and answer the question that follows.

Question No. : 46

A word and number arrangement machine when given an input line of words and numbers, rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.

Input:	goal	63	57	home	five	task	82	17
Step I:	82	goal	63	57	home	five	task	17
Step II:	82	five	goal	63	57	home	task	17
Step III:	82	five	63	goal	57	home	task	17
Step IV:	82	five	63	goal	57	home	17	task

And Step IV is the last output.
As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

Input: host 15 32 page 43 over mother 92

Which of the following steps will be the last but one ?

- ✓ A) IV B) V C) VI D) VIII

Explanation:- **Input:** host 15 32 page 43 over mother 92

Step I : 92 host 15 32 page 43 over mother

Step II : 92 host 43 15 32 page over mother

Step III : 92 host 43 mother 15 32 page over

Step IV : 92 host 43 mother 32 15 page over

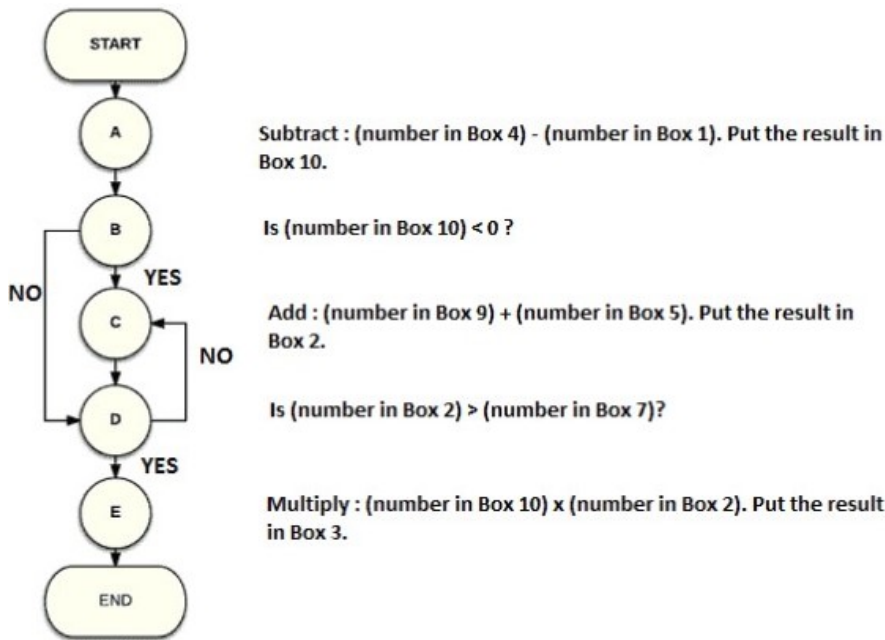
Step V : 92 host 43 mother 32 over 15 page Clearly,

Clearly, Step V is the last step and Step IV is the last but one.

DIRECTIONS for the question: Study the flow chart give below and the questions that follow.

Question No. : 47

Box No.	1	2	3	4	5	6	7	8	9	10
	13	20	7	12	10	2	5	1	0	18



At the end of the flow chart the number placed in which of the following boxes will remain unchanged

- A) Box 3 B) Box 10 C) Box 2 ☒ D) Box 7

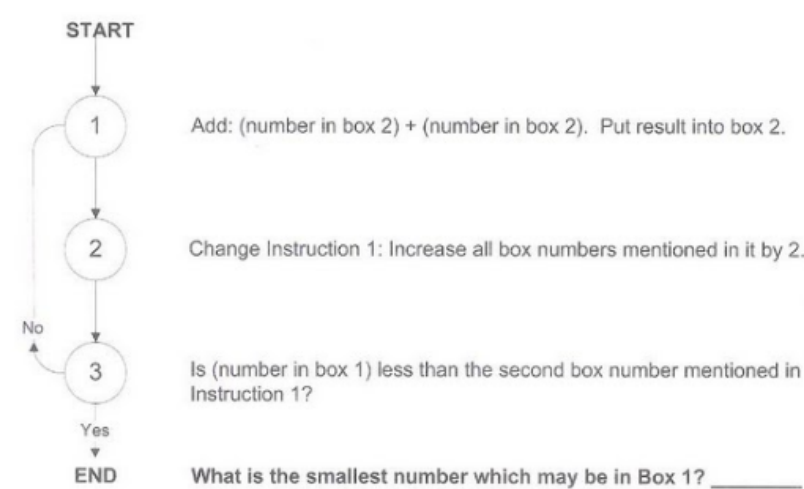
Explanation:- In instruction 1, Box 10 is modified;
In instruction 3, Box 2 is modified;
and in instruction 5, Box 3 gets modified;

Therefore out of given options only Box 7 remains unchanged.

DIRECTIONS for the question: Study the flow chart give below and the questions that follow.

Question No. : 48

Box No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	?	2	3	4	5	6	7	8	9	10	11	12	13	14



The purpose of the following chart is to double the number in each of the boxes 2, 4, 6, 8 and 10.
In order to accomplish exactly this - no more and no less - What is the smallest number which may be in box 1?

- ☒ A) 19 B) 15 C) 9 D) 11

Explanation:- In instruction 1, Box 10 is modified;
In instruction 3, Box 2 is modified;
and in instruction 5, Box 3 gets modified;

Therefore out of given options only Box 7 remains unchanged.

DIRECTIONS for the question: Answer the following question as per the best of your judgment.

Question No. : 49



Which of the following figures will complete the question figure?

- A)
- B)
- C)
- ✓D)

Explanation:-
To complete the pattern Figure D is the correct match ,



DIRECTIONS for the question: Which of the given options will complete the figure given in the question?

Question No. : 50



- A)
- B)
- C)
- ✓D)

Explanation:-
By observing the pattern, we can conclude that the figure on top right is either similar or symmetrical to bottom left. Similarly figure in top left has to be either mirror image of bottom right or similar. So two options are there, (c) and (d) but by using option 'c' we find that the figure doesn't looks symmetrical. Hence option 4 is the answer.

DIRECTIONS for the question: Choose the figure which is different from the rest.

Question No. : 51

- A)
- ✓B)
- C)
- D)

Explanation:-
All other figures can be rotated into each other. Option B is the answer as it is the mirror image of original figure.

DIRECTIONS for the question: Choose the figure which is different from the rest.

Question No. : 52

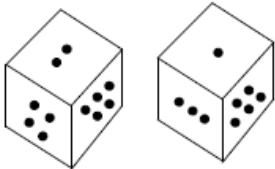
- A)
- ✓B)
- C)
- D)

Explanation:-
In fig. (b), the triangle in the lower part of the figure is inverted. Hence answer is option B.

DIRECTIONS for the question: Solve the following question and mark the best possible option.

Question No. : 53

Study the two different positions of a cube given below with dots from 1 to 6 marked on its faces. Find out how many dots are there on the face opposite to that containing 4 dots?



A) 1 B) 2 ☒ C) 3 D) 5





Explanation:-
As we can see in the diagrams, the 5 dots side has 4 dots side and 3 dots side as its adjacent sides. So there are 3 dots on the face opposite to that containing 4 dots. Hence answer is 3rd option.

DIRECTIONS for the question: Solve the following question and mark the most appropriate option.

Question No. : 54

Which one of the four boxes given below is created by folding the given design in the question figure?



- A)  B)  C)  ☒ D) 

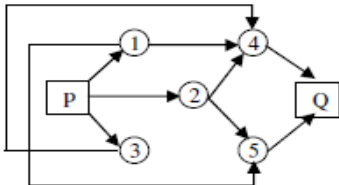
Explanation:-
By visualising the given figure and folding we get 4th option as answer.



DIRECTIONS for the question: Solve the following question and mark the most appropriate option.

Question No. : 55

What is the number of routes from P to Q?



☒ A) 5 B) 6 C) 9 D) 12

Explanation:-
Let us enumerate the routes.
1-4, 1-5, 2-4, 2-5, 3-4
Only 5 routes.

Hence the answer is option 1

Question No. : 56

Which of the options can be associated with all the objects?





- A)  B)  C)  D) 

Explanation:-

Section : Verbal Usage & Reading Comprehension

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 57

We believe that in the context of innovation initiatives, learning is so valuable that it should be prioritized over results. This contention, as you might imagine, is often met with instinctive and sometimes sharply worded resistance. Prioritizing literally anything over results can be anathema inside the Performance Engine, where the emphasis is always on time, on budget, and on spec. Furthermore, learning sounds like such a soft, amorphous, and difficult-to-assess objective.

Therefore let us be very clear. We are not talking about learning in the general feel-good sense of the word. And, we are certainly not imagining that any senior executive would be happy to hear a statement like, "Hey, boss, the project failed, but let me tell you, I feel like I learned a ton!"

Instead, we are referring to a very specific and concrete form of learning. For our purposes, learning is defined as improvement in the accuracy of predictions.

Learning is a process. Every plan for an innovation initiative has some wild guesses in it. Over time, learning will turn those wild guesses in to more informed estimates, and then later turn those informed estimates into reliable forecasts.

Learning should take priority over results because faster learning leads to better results. There is a crystal clear logic here. With better predictions, you make better decisions and when you make better decisions you get better results.

That said, faster learning hardly guarantees a successful innovation initiative. Even when experiments are run in a disciplined way, there is still risk. What fast learning does guarantee, however, is that if you fail, you'll do it in the quickest and cheapest way possible. All innovation leaders should strive to "spend a little, learn a lot."

Business people do not, in general, get a lot of practice in running disciplined experiments. Experiments, after all, are the domain of scientists. Nonetheless, every one learns the basics of experimentation, and does so as early as elementary school. The fundamental steps are familiar.

First, plan the experiment to test a hypothesis. Then, predict what you think is going to happen, documenting how you came up with your predictions as clearly as possible. The next step is to execute the experiment, collecting all relevant data. Finally, analyze. Specifically, compare what you thought was going to happen to what actually happened. It is through a careful analysis of the differences between predictions and outcomes that you learn.

Practicing just the fundamentals can have an enormous impact. The mistakes that we've observed don't relate to the finer points of rigorous experimentation that scientists take pride in their knowledge of, like confirmation biases and skewed sample sets. Instead, the breakdowns are in the basics.

Excerpted from pages 108-111 of 'Beyond the Idea' by Vijay Govindarajan & Chris Trimble

Which of the following would be an apt title for the passage?

- A) Learning matters, intuition even more B) Learning and Accurate Predictions C) Predictions : a disciplined approach
✓D) Learning First, Profits second

Explanation:-

The passage states that learning is so valuable that it should be prioritized over results. Thereafter it talks about how learning leads to better results. It also states that fast learning saves on time and money. And finally how leaning the basics of experimentation and practicing them can have an enormous impact.

Option1- There is no mention of intuition in the passage

Option2- The passage talks about learning and better predictions – not accurate predictions

Option3- The passage talks about disciplined experimentation and not disciplined predictions

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 58

We believe that in the context of innovation initiatives, learning is so valuable that it should be prioritized over results. This contention, as you might imagine, is often met with instinctive and sometimes sharply worded resistance. Prioritizing literally anything over results can be anathema inside the Performance Engine, where the emphasis is always on time, on budget, and on spec. Furthermore, learning sounds like such a soft, amorphous, and difficult-to-assess objective.



Therefore let us be very clear. We are not talking about learning in the general feel-good sense of the word. And, we are certainly not imagining that any senior executive would be happy to hear a statement like, "Hey, boss, the project failed, but let me tell you, I feel like I learned a ton!"

Instead, we are referring to a very specific and concrete form of learning. For our purposes, learning is defined as improvement in the accuracy of predictions.

Learning is a process. Every plan for an innovation initiative has some wild guesses in it. Over time, learning will turn those wild guesses in to more informed estimates, and then later turn those informed estimates into reliable forecasts.

Learning should take priority over results because faster learning leads to better results. There is a crystal clear logic here. With better predictions, you make better decisions and when you make better decisions you get better results.

That said, faster learning hardly guarantees a successful innovation initiative. Even when experiments are run in a disciplined way, there is still risk. What fast learning does guarantee, however, is that if you fail, you'll do it in the quickest and cheapest way possible. All innovation leaders should strive to "spend a little, learn a lot."

Business people do not, in general, get a lot of practice in running disciplined experiments. Experiments, after all, are the domain of scientists. Nonetheless, every one learns the basics of experimentation, and does so as early as elementary school. The fundamental steps are familiar.

First, plan the experiment to test a hypothesis. Then, predict what you think is going to happen, documenting how you came up with your predictions as clearly as possible. The next step is to execute the experiment, collecting all relevant data. Finally, analyze. Specifically, compare what you thought was going to happen to what actually happened. It is through a careful analysis of the differences between predictions and outcomes that you learn.

Practicing just the fundamentals can have an enormous impact. The mistakes that we've observed don't relate to the finer points of rigorous experimentation that scientists take pride in their knowledge of, like confirmation biases and skewed sample sets. Instead, the breakdowns are in the basics.

Excerpted from pages 108-111 of 'Beyond the Idea' by Vijay Govindarajan & Chris Trimble

All of the following can be inferred from the passage except

- A) Every innovation initiative should be properly regarded as an experiment
- B) Disciplined experimentation yields rapid learning
- C) Rapid learning promises better results
- ✓D) Delays confound the ability to make accurate conjectures about cause and effect.

Explanation:-

There is no mention in the passage about what would happen if there was a delay in making speculations or predictions.

The author states that all innovation leaders should strive to "spend a little and learn a lot".

This is with reference to experimentation and he further lists the fundamental steps of experimentation.

The author states that experiments run in a disciplined way can still involve risks. But it allows for faster learning and with less cost. The passage states – faster learning leads to better results

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 59

We believe that in the context of innovation initiatives, learning is so valuable that it should be prioritized over results. This contention, as you might imagine, is often met with instinctive and sometimes sharply worded resistance. Prioritizing literally anything over results can be anathema inside the Performance Engine, where the emphasis is always on time, on budget, and on spec. Furthermore, learning sounds like such a soft, amorphous, and difficult-to-assess objective.

Therefore let us be very clear. We are not talking about learning in the general feel-good sense of the word. And, we are certainly not imagining that any senior executive would be happy to hear a statement like, "Hey, boss, the project failed, but let me tell you, I feel like I learned a ton!"

Instead, we are referring to a very specific and concrete form of learning. For our purposes, learning is defined as improvement in the accuracy of predictions.

Learning is a process. Every plan for an innovation initiative has some wild guesses in it. Over time, learning will turn those wild guesses in to more informed estimates, and then later turn those informed estimates into reliable forecasts.

Learning should take priority over results because faster learning leads to better results. There is a crystal clear logic here. With better predictions, you make better decisions and when you make better decisions you get better results.

That said, faster learning hardly guarantees a successful innovation initiative. Even when experiments are run in a disciplined way, there is still risk. What fast learning does guarantee, however, is that if you fail, you'll do it in the quickest and cheapest way possible. All innovation leaders should strive to "spend a little, learn a lot."

Business people do not, in general, get a lot of practice in running disciplined experiments. Experiments, after all, are the domain of scientists. Nonetheless, every one learns the basics of experimentation, and does so as early as elementary school. The fundamental steps are familiar.



First, plan the experiment to test a hypothesis. Then, predict what you think is going to happen, documenting how you came up with your predictions as clearly as possible. The next step is to execute the experiment, collecting all relevant data. Finally, analyze. Specifically, compare what you thought was going to happen to what actually happened. It is through a careful analysis of the differences between predictions and outcomes that you learn.

Practicing just the fundamentals can have an enormous impact. The mistakes that we've observed don't relate to the finer points of rigorous experimentation that scientists take pride in their knowledge of, like confirmation biases and skewed sample sets. Instead, the breakdowns are in the basics.

Excerpted from pages 108-111 of 'Beyond the Idea' by Vijay Govindarajan & Chris Trimble

With which of the following is the author likely to agree with?

- ✓A) If a company adopts just the fundamentals of disciplined experimentation, it will be a giant step ahead of its peers.
- B) Focusing on performance metrics focuses attention on the wrong information and encourages the formation of the wrong kinds of expectations.
- C) Innovation leaders are often too close to the problem to analyse results in a dispassionate manner.
- D) Organisations are not only built for innovation, but also for ongoing operations.

Explanation:-

The author states that practicing the fundamentals can have an enormous impact on the company. Hence he would definitely agree with companies adopting the fundamentals which will lead to a headstart for the company.

The author states that innovation leaders should strive to "spend a little, learn a lot." Hence he wants them to tackle the problem. That rules out option 3. The author believes that learning should be prioritized over results and adds that the emphasis is always on time, on budget, and on spec. Hence option 4 is ruled out.

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 60

We believe that in the context of innovation initiatives, learning is so valuable that it should be prioritized over results. This contention, as you might imagine, is often met with instinctive and sometimes sharply worded resistance. Prioritizing literally anything over results can be anathema inside the Performance Engine, where the emphasis is always on time, on budget, and on spec. Furthermore, learning sounds like such a soft, amorphous, and difficult-to-assess objective.

Therefore let us be very clear. We are not talking about learning in the general feel-good sense of the word. And, we are certainly not imagining that any senior executive would be happy to hear a statement like, "Hey, boss, the project failed, but let me tell you, I feel like I learned a ton!"

Instead, we are referring to a very specific and concrete form of learning. For our purposes, learning is defined as improvement in the accuracy of predictions.

Learning is a process. Every plan for an innovation initiative has some wild guesses in it. Over time, learning will turn those wild guesses in to more informed estimates, and then later turn those informed estimates into reliable forecasts.

Learning should take priority over results because faster learning leads to better results. There is a crystal clear logic here. With better predictions, you make better decisions and when you make better decisions you get better results.

That said, faster learning hardly guarantees a successful innovation initiative. Even when experiments are run in a disciplined way, there is still risk. What fast learning does guarantee, however, is that if you fail, you'll do it in the quickest and cheapest way possible. All innovation leaders should strive to "spend a little, learn a lot."

Business people do not, in general, get a lot of practice in running disciplined experiments. Experiments, after all, are the domain of scientists. Nonetheless, every one learns the basics of experimentation, and does so as early as elementary school. The fundamental steps are familiar.

First, plan the experiment to test a hypothesis. Then, predict what you think is going to happen, documenting how you came up with your predictions as clearly as possible. The next step is to execute the experiment, collecting all relevant data. Finally, analyze. Specifically, compare what you thought was going to happen to what actually happened. It is through a careful analysis of the differences between predictions and outcomes that you learn.

Practicing just the fundamentals can have an enormous impact. The mistakes that we've observed don't relate to the finer points of rigorous experimentation that scientists take pride in their knowledge of, like confirmation biases and skewed sample sets. Instead, the breakdowns are in the basics.

Excerpted from pages 108-111 of 'Beyond the Idea' by Vijay Govindarajan & Chris Trimble

All of the following are true with respect to learning except,

- ✓A) For a successful innovation initiative, learning is a foolproof safeguard against failure.
- B) Over time, learning ensures precision in predictions.
- C) Learning takes a backseat with results always being the main focus.
- D) Learning allows for better forecasts, which leads to better decisions.

Explanation:-



The passage states that faster learning hardly guarantees a successful innovation initiative and hence we cannot say that learning is a foolproof safeguard against failure. Hence option 1 is not true.

Option 2 – refer to “Over time, learning will turnestimates into reliable forecasts.”

Option 3 – refer to “Prioritizing literally anything over results (one of which is learning) can be anathema emphasis is always on time, on budget, and on spec.”

Option 4 – Refer to “ Learning should take priority With better predictions, you make better decisions and when you make better decisions you get better results.”

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 61

Although much has been written about the theological conflicts with Darwinian theory, little is known of the powerful scientific objections that modified Darwin’s beliefs.

During Darwin’s lifetime, the accepted theory of heredity was not Mendel’s theory of particulate inheritance, which, though published, was unrecognized, but the theory of blending inheritance (The inheritance pattern of a system involving incomplete dominance, whereby characters are inherited in heterozygous individuals that show the effects of both alleles. As a result, the inherited characters in the offspring are intermediate between those of the parents.), which holds that forms intermediate between those of the parents result from mating. Jenkin pointed out that if a rare and favorable mutation occurred, it would soon be blended out by repeated crossings from the wild-type (a phenotype, genotype, or gene that predominates in a natural population of organisms or strain of organisms in contrast to that of natural or laboratory mutant forms; also: an organism or strain displaying the wild type) form. Disputing Darwin’s conception of evolution as proceeding through the natural selection of those with slightly better characteristics that arose randomly, Jenkin concluded that natural selection could not account for the tremendous diversity of life, hypothesizing that large numbers of organisms mutated simultaneously in the same direction—a controlled orthogenetic process (orthogenetic selection: resembling a series of “special creations.”

Since “special creationism” was an ideological target of his, Darwin found himself in a quandary. Although he did not abandon his theory, he admitted that natural selection played a much smaller part in evolution than he had previously claimed. He also embraced the Lamarckian concept that acquired traits in parents are transmitted to their offspring, thus providing a mechanism by which an entire population could change in the same direction at once.

Another potent objection came from the physicists led by Lord Kelvin, who contested the assumption of previous geologists and biologists that life had existed for billions of years, if not infinitely. How, they asked, could evolution proceed by slow steps in millions of years, and how could advance forms recently evolved show such great differences? The Kelvinists, basing their conclusion on the assumption that the sun was an incandescent liquid mass rapidly radiating heat, calculated that the age of the earth was between 20 and 40 million years.

Admitting that their calculations were correct and their premises rational, Darwin was forced to adjust this theory. He proposed that change had occurred much more rapidly in the past than in the present, where species seemed static, and that more advanced forms varied more rapidly than lower forms. This provided further reason to advocate Lamarck’s theory of inheritance, because that could account for the rapid change.

Interestingly, both these retreats of Darwin were later shown to be faulty. The discovery that the sun runs on a nearly infinite amount of atomic fuel totally invalidated Kelvin’s argument, Mendel was “rediscovered” in the twentieth century, when it was pointed out that the particulate nature of inheritance meant that favorable mutation not only could persist, but could rapidly become prevalent.

The primary purpose of the passage is to

- A) outline the process by which Darwin formulated and modified his theory of natural selection
- B) propose a new interpretation of Darwin’s theory of evolution
- C) explain how other scientists of the time helped Darwin modify and perfect his theories
- ✓D) discuss some of the scientific controversy that Darwin sparked and describe his response to it

Explanation:- In the given question, we find the debate around Darwin’s work and how his theories were disputed. The passage then goes on to trace how Darwin responded to these claims. Overall, the passage simply narrates a sequence of events, which center around the work done by Darwin. This makes option D is the most probable answer in the given case.

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 62

Although much has been written about the theological conflicts with Darwinian theory, little is known of the powerful scientific objections that modified Darwin’s beliefs.

During Darwin’s lifetime, the accepted theory of heredity was not Mendel’s theory of particulate inheritance, which, though published, was unrecognized, but the theory of blending inheritance (The inheritance pattern of a system involving incomplete dominance, whereby characters are inherited in heterozygous individuals that show the effects of both alleles. As a result, the inherited characters in the offspring are intermediate between those of the parents.), which holds that forms intermediate between those of the parents result from mating. Jenkin pointed out that if a rare and favorable mutation occurred, it would soon be blended out by repeated crossings from the wild-type (a phenotype, genotype, or gene that predominates in a natural population of organisms or strain of organisms in contrast to that of natural or laboratory mutant forms; also: an organism or



strain displaying the wild type) form. Disputing Darwin's conception of evolution as proceeding through the natural selection of those with slightly better characteristics that arose randomly, Jenkin concluded that natural selection could not account for the tremendous diversity of life, hypothesizing that large numbers of organisms mutated simultaneously in the same direction—a controlled orthogenetic process (orthogenetic selection: resembling a series of "special creations."

Since "special creationism" was an ideological target of his, Darwin found himself in a quandary. Although he did not abandon his theory, he admitted that natural selection played a much smaller part in evolution than he had previously claimed. He also embraced the Lamarckian concept that acquired traits in parents are transmitted to their offspring, thus providing a mechanism by which an entire population could change in the same direction at once.

Another potent objection came from the physicists led by Lord Kelvin, who contested the assumption of previous geologists and biologists that life had existed for billions of years, if not infinitely. How, they asked, could evolution proceed by slow steps in millions of years, and how could advance forms recently evolved show such great differences? The Kelvinists, basing their conclusion on the assumption that the sun was an incandescent liquid mass rapidly radiating heat, calculated that the age of the earth was between 20 and 40 million years.

Admitting that their calculations were correct and their premises rational, Darwin was forced to adjust this theory. He proposed that change had occurred much more rapidly in the past than in the present, where species seemed static, and that more advanced forms varied more rapidly than lower forms. This provided further reason to advocate Lamarck's theory of inheritance, because that could account for the rapid change.

Interestingly, both these retreats of Darwin were later shown to be faulty. The discovery that the sun runs on a nearly infinite amount of atomic fuel totally invalidated Kelvin's argument, Mendel was "rediscovered" in the twentieth century, when it was pointed out that the particulate nature of inheritance meant that favorable mutation not only could persist, but could rapidly become prevalent.

It can be inferred from the passage that the theory of blending inheritance would predict that the offspring of

- A) two strains of snapdragons, one with abnormal, radically symmetrical flowers and the other with normal, bilaterally symmetrical flowers, would always have normal, bilaterally symmetrical flowers
- ☒ B) a white horse and a black horse would always be gray
- C) a man with type A blood and a woman with type B blood would always have type A, type B, or type AB blood
- D) a fly with large eyes and a fly with small eyes would always have one large eye and one small eye

Explanation:-

The answer can be found from the lines: '....which holds that forms intermediate between those of the parents result from mating.' Other options lean towards one parent instead of intermediate form

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 63

Although much has been written about the theological conflicts with Darwinian theory, little is known of the powerful scientific objections that modified Darwin's beliefs.

During Darwin's lifetime, the accepted theory of heredity was not Mendel's theory of particulate inheritance, which, though published, was unrecognized, but the theory of blending inheritance (The inheritance pattern of a system involving incomplete dominance, whereby characters are inherited in heterozygous individuals that show the effects of both alleles. As a result, the inherited characters in the offspring are intermediate between those of the parents.), which holds that forms intermediate between those of the parents result from mating. Jenkin pointed out that if a rare and favorable mutation occurred, it would soon be blended out by repeated crossings from the wild-type (a phenotype, genotype, or gene that predominates in a natural population of organisms or strain of organisms in contrast to that of natural or laboratory mutant forms; also: an organism or strain displaying the wild type) form. Disputing Darwin's conception of evolution as proceeding through the natural selection of those with slightly better characteristics that arose randomly, Jenkin concluded that natural selection could not account for the tremendous diversity of life, hypothesizing that large numbers of organisms mutated simultaneously in the same direction—a controlled orthogenetic process (orthogenetic selection: resembling a series of "special creations."

Since "special creationism" was an ideological target of his, Darwin found himself in a quandary. Although he did not abandon his theory, he admitted that natural selection played a much smaller part in evolution than he had previously claimed. He also embraced the Lamarckian concept that acquired traits in parents are transmitted to their offspring, thus providing a mechanism by which an entire population could change in the same direction at once.

Another potent objection came from the physicists led by Lord Kelvin, who contested the assumption of previous geologists and biologists that life had existed for billions of years, if not infinitely. How, they asked, could evolution proceed by slow steps in millions of years, and how could advance forms recently evolved show such great differences? The Kelvinists, basing their conclusion on the assumption that the sun was an incandescent liquid mass rapidly radiating heat, calculated that the age of the earth was between 20 and 40 million years.

Admitting that their calculations were correct and their premises rational, Darwin was forced to adjust this theory. He proposed that change had occurred much more rapidly in the past than in the present, where species seemed static, and that more advanced forms varied more rapidly than lower forms. This provided further reason to advocate Lamarck's theory of inheritance, because that could account for the rapid change.



Interestingly, both these retreats of Darwin were later shown to be faulty. The discovery that the sun runs on a nearly infinite amount of atomic fuel totally invalidated Kelvin's argument, Mendel was "rediscovered" in the twentieth century, when it was pointed out that the particulate nature of inheritance meant that favorable mutation not only could persist, but could rapidly become prevalent.

Which of the following, if it could be demonstrated, would tend to support the Lamarckian concept that Darwin embraced?

- ✓ A) Human beings evolved from animals much like chimpanzees as a result of an accumulation of changes in the gene pool through thousands of generations.
- B) Some parental traits disappear in offspring and reappear in the following generation.
- C) All species of organisms were immutably created in their present forms.
- D) Rats who have had their tails cut off produce tailless offspring.

Explanation:-

This is another application question and its answer can be found in the lines: He also embraced the Lamarckian concept that acquired traits in parents are transmitted to their offspring, thus providing a mechanism by which an entire population could change in the same direction at once.

Option 1 talks about humans evolving as an accumulation of changes and Hence is correct

Option 4 is incorrect as it's not the case that rats' tails didn't exist that it wouldn't form in the offsprings....

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 64

The children don't believe me when I tell them life used to be hard. They think it's a routine out of Charles Dickens, a tale of filthy lodgings, stale bread and no Internet, where even the most resourceful among us struggled to survive in a world without teeth-bleaching or Kindle. My daughter rolls her eyes whenever I begin my stories of woe. "Here he goes," she says. "Tell the one about how you used to walk to school alone. And the other one, about how you had to remember people's phone numbers! And: Watch this. Dad, tell the one about how you used to swim outside, like in a pond or something. With frogs in it!"

"You know, darling. It wasn't so long ago. And it wasn't such a hardship either. There was actually something quite pleasant about, say, getting lost as you walked in a city, without immediately resorting to Google Maps."

"As if!"

And so it goes. No contest. The infant experience of the easy life can only ridicule the idea that patience and effort used to be fine. But I've been trying to examine the problem from a new angle, and I keep coming back to the same truth: Life is better. In some nostalgic, carefree, totally invented Mississippi River of the mind, we were always floating downstream in a vessel of our own making, always happy to have nothing, living high on our wits and our basic decencies. But was it nice? Was life as good as it is now? One is almost programmed, if over the age of 35, to say no to this question. One is supposed to stare into the middle distance and recall the superior days of a life less needy, the rich rewards of having to wait and having to try and having to do without. But the actual truth, my friends, is that my childhood would have been greatly, no, infinitely, improved, if only I'd had a smartphone and a dog walker.

To believe in progress is not only to believe in the future: It is also to usher in the possibility that the past wasn't all that. I now feel — and this is a revelation — that my past was an interesting and quite fallow period spent waiting for the Internet. At home, I'll continue to cause a festival of eye-rolling with my notion that some values were preserved by the low-tech environment, but, more generally speaking, life has just gotten better and better. The question is: How far would you go with that? My daughter's mother goes all the way. "I can sit in my holiday house in the country," she says, "and order furniture, clothes, anything really, to come from London and Paris. It's killed provincialism. It's also killed human loneliness."

"That's shocking," I say. "Luxury can't kill loneliness."

"You want to bet?"

The author of the passage would agree with all of the statements except:

- A) Children in the current generation cannot envisage a life without technology
- B) The earlier internet was available, the better it would have been
- ✓ C) An easy life leads to an erosion of qualities such patience and effort
- D) Even though we may struggle to accept the view, we have to agree that maybe the past was truly not as good as it could have been

Explanation:-

Option 1 can be derived from the lines: The children don't believe me when I tell them life used to be hard. They think it's a routine out of Charles Dickens, a tale of filthy lodgings, stale bread and no Internet, where even the most resourceful among us struggled to survive in a world without teeth-bleaching or Kindle.

Option 3 is incorrect. Refer to the complete reference: The infant experience of the easy life can only ridicule the idea that patience and effort used to be fine. But I've been trying to examine the problem from a new angle, and I keep coming back to the same truth: Life is better.

The author clearly implies that life is better now and contradicts the first statement. Also, option 3 alters the context in which the author mentions the given reference.

Option 2 can be derived from the lines: I now feel — and this is a revelation — that my past was an interesting and quite fallow period spent waiting for the Internet.



Option 4 can be derived from the lines: To believe in progress is not only to believe in the future: It is also to usher in the possibility that the past wasn't all that.

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 65

The children don't believe me when I tell them life used to be hard. They think it's a routine out of Charles Dickens, a tale of filthy lodgings, stale bread and no Internet, where even the most resourceful among us struggled to survive in a world without teeth-bleaching or Kindle. My daughter rolls her eyes whenever I begin my stories of woe. "Here he goes," she says. "Tell the one about how you used to walk to school alone. And the other one, about how you had to remember people's phone numbers! And: Watch this. Dad, tell the one about how you used to swim outside, like in a pond or something. With frogs in it!"

"You know, darling. It wasn't so long ago. And it wasn't such a hardship either. There was actually something quite pleasant about, say, getting lost as you walked in a city, without immediately resorting to Google Maps."

"As if!"

And so it goes. No contest. The infant experience of the easy life can only ridicule the idea that patience and effort used to be fine. But I've been trying to examine the problem from a new angle, and I keep coming back to the same truth: Life is better. In some nostalgic, carefree, totally invented Mississippi River of the mind, we were always floating downstream in a vessel of our own making, always happy to have nothing, living high on our wits and our basic decencies. But was it nice? Was life as good as it is now? One is almost programmed, if over the age of 35, to say no to this question. One is supposed to stare into the middle distance and recall the superior days of a life less needy, the rich rewards of having to wait and having to try and having to do without. But the actual truth, my friends, is that my childhood would have been greatly, no, infinitely, improved, if only I'd had a smartphone and a dog walker.

To believe in progress is not only to believe in the future: It is also to usher in the possibility that the past wasn't all that. I now feel — and this is a revelation — that my past was an interesting and quite fallow period spent waiting for the Internet. At home, I'll continue to cause a festival of eye-rolling with my notion that some values were preserved by the low-tech environment, but, more generally speaking, life has just gotten better and better. The question is: How far would you go with that? My daughter's mother goes all the way. "I can sit in my holiday house in the country," she says, "and order furniture, clothes, anything really, to come from London and Paris. It's killed provincialism. It's also killed human loneliness."

"That's shocking," I say. "Luxury can't kill loneliness."

"You want to bet?"

The wife of the author of the passage believes:

- A) Localism has have been diminished by technology and we live in a truly global environment
- B) Shopping has been made easier and this means that one is never lonely
- ✓C) Technology has ushered in a life where barriers have been broken and levels of loneliness have been drastically reduced
- D) No deduction can be made as the wife's views are not mentioned in the passage

Explanation:-

Refer to the lines: My daughter's mother goes all the way. "I can sit in my holiday house in the country," she says, "and order furniture, clothes, anything really, to come from London and Paris. It's killed provincialism. It's also killed human loneliness." Options 1 and 2 miss the main points of the author of the passage and option 4 is clearly incorrect (as we can see from the lines above).

Option 3 conveys the underlying meaning of the wife's statement.

DIRECTIONS for the question: Read the passage and answer the question based on it.

Question No. : 66

The children don't believe me when I tell them life used to be hard. They think it's a routine out of Charles Dickens, a tale of filthy lodgings, stale bread and no Internet, where even the most resourceful among us struggled to survive in a world without teeth-bleaching or Kindle. My daughter rolls her eyes whenever I begin my stories of woe. "Here he goes," she says. "Tell the one about how you used to walk to school alone. And the other one, about how you had to remember people's phone numbers! And: Watch this. Dad, tell the one about how you used to swim outside, like in a pond or something. With frogs in it!"

"You know, darling. It wasn't so long ago. And it wasn't such a hardship either. There was actually something quite pleasant about, say, getting lost as you walked in a city, without immediately resorting to Google Maps."

"As if!"

And so it goes. No contest. The infant experience of the easy life can only ridicule the idea that patience and effort used to be fine. But I've been trying to examine the problem from a new angle, and I keep coming back to the same truth: Life is better. In some nostalgic, carefree, totally invented Mississippi River of the mind, we were always floating downstream in a vessel of our own making, always happy to have nothing, living high on our wits and our basic decencies. But was it nice? Was life as good as



it is now? One is almost programmed, if over the age of 35, to say no to this question. One is supposed to stare into the middle distance and recall the superior days of a life less needy, the rich rewards of having to wait and having to try and having to do without. But the actual truth, my friends, is that my childhood would have been greatly, no, infinitely, improved, if only I'd had a smartphone and a dog walker.

To believe in progress is not only to believe in the future: It is also to usher in the possibility that the past wasn't all that. I now feel — and this is a revelation — that my past was an interesting and quite fallow period spent waiting for the Internet. At home, I'll continue to cause a festival of eye-rolling with my notion that some values were preserved by the low-tech environment, but, more generally speaking, life has just gotten better and better. The question is: How far would you go with that? My daughter's mother goes all the way. "I can sit in my holiday house in the country," she says, "and order furniture, clothes, anything really, to come from London and Paris. It's killed provincialism. It's also killed human loneliness."

"That's shocking," I say. "Luxury can't kill loneliness."

"You want to bet?"

The author of the passage adopts a style in the passage which can be labelled as:

- A) witty yet laced with profound implications B) pedantic yet containing nuggets of wisdom
C) informative yet underpinned by deep thoughts ☒ D) conversational yet laced with implied suggestions

Explanation:-

In the given case, the author of the passage adopts a very conversational approach, where he uses dialogues with his own daughter to convey the main points of the passage. This sentiment is best expressed by option 4 in the given case.

Option 1 is ruled out as the author is not witty.

Option 2 is ruled out because of the usage of the word pedantic. Pedantic means 'marked by a narrow focus on or display of learning especially its trivial aspects'. This sentiment is clearly irrelevant in the given context.

Option 3, though partially correct, does not convey the conversational nature of the passage.