SECTION A: DATA INTERPRETATION AND QUANTITATIVE ABILITY

Note: All units of measurement are in centimetres, unless otherwise specified.

1. Four digits of the number 29138576 are omitted so that the result is as large as possible. The largest omitted digit is

(A) 9   (B) 8   (C) 7   (D) 6   (E) 5

Solution:

We have to omit four digits in such a manner that we get the largest possible number as the result.

   We will omit 2, 1, 3 and 5 and the result will be 9876.

    The largest omitted digit will be 5.

Hence, option E.

2. Interpret relationship between the returns of stock X and Mutual Fund Y based on the following graph, where percentage return of Stock X and Mutual Fund Y are given for sixteen days of a month.
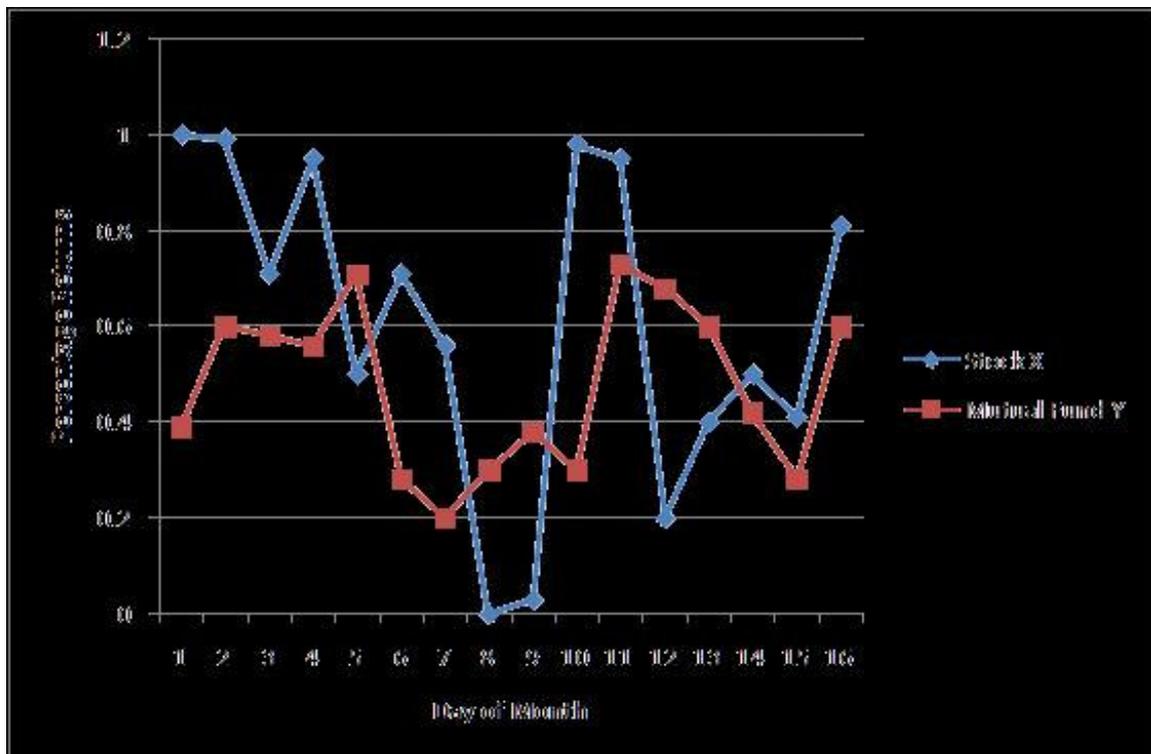
(A) Returns of stock X are directly proportional to Mutual Fund Y.

(B) Average returns from Stock X and Mutual Fund Y are the same.

(C) Stock X is less volatile than Mutual Fund Y.

(D) Stock X is inversely proportional to Mutual Fund Y.

(E) Stock X is more volatile than Mutual Fund Y.

Solution:

It can be seen from the line graph that the minimum value obtained by the graph of stock X is less than that of the graph of Mutual Fund Y; and the maximum value obtained by the graph of stock X is greater than that of the graph of Mutual Fund Y.

Hence, option E.

For questions 3 and 4, a statement is followed by three conclusions. Select the answer from the following options.

A. Using the given statement, only conclusion I can be derived.

B. Using the given statement, only conclusion II can be derived.

C. Using the given statement, only conclusion III can be derived.

D. Using the given statement, all conclusions can be derived.

E. Using the given statement, none of the three conclusions I, II and III can be derived.

3. An operation "#" is defined by

$$\# = 1 - \frac{}{}$$

Conclusion I. $(2 \# 1) \# (4 \# 3) = 1$

Conclusion II. $(3 \# 1) \# (4 \# 2) = 2$

Conclusion III. $(2 \# 3) \# (1 \# 3) = 0$

Solution:

$$2 \# 1 = 1 - \frac{1}{2} = \frac{1}{2}$$

$$4 \# 3 = 1 - \frac{3}{4} = \frac{1}{4}$$

$$(2 \# 1) \# (4 \# 3) = \frac{1}{2} \# \frac{1}{4} = 1 - \frac{1}{2} = \frac{1}{2}$$

Conclusion I cannot be derived.

$$3 \# 1 = 1 - \frac{1}{3} = \frac{2}{3}$$

$$4 \# 2 = 1 - \frac{2}{4} - \frac{1}{2} =$$

$$(3 \# 1) \# (4 \# 2) = \frac{2}{3 \# 2 = 1 - \frac{2}{2}} - \frac{1}{2} = 1 - \frac{3}{4} - \frac{1}{4} =$$

Conclusion II cannot be derived.

$$2 \# 3 = 1 - \frac{3}{2} + = -2$$

$$1 \# 3 = 1 - \frac{3}{1} = -2$$

$$(2 \# 3) \# (1 \# 3) = -\frac{1}{2 \# - 2 = 1 - \frac{1}{2}} = \frac{-2}{-\frac{1}{2}} = 1 - 4 = -3$$

Conclusion III cannot be derived.

Hence, option E.

4. A, B, C and D are whole numbers such that

A + B + C = 118

B + C + D = 156

C + D + A = 166

D + A + B = 178

Conclusion I. A is the smallest number and A = 21.

Conclusion II. D is the largest number and D = 88.

Conclusion III. B is the largest number and B = 56.

Solution:

A + B + C = 118   … (i)

B + C + D = 156   … (ii)

C + D + A = 166   … (iii)

D + A + B = 178   … (iv)

If we add equations (i), (ii), (iii) and (iv), we get,

3(A + B + C + D) = 618

   A + B + C + D = 206   … (v)

Subtracting equation (i) from equation (v), we get,

D = 88

Subtracting equation (ii) from equation (v), we get,

A = 50

Subtracting equation (iii) from equation (v), we get,

B = 40

C = 28

Only conclusion II can be derived.

Hence, option B.

5. If $[X]$ denotes the greatest integer less than or equal to X, then

$$\left[\frac{1}{3}\right] + \left[\frac{1}{3}+\frac{1}{99}\right] + \left[\frac{1}{3}+\frac{2}{99}\right] + \cdots + \left[\frac{1}{3}+\frac{98}{99}\right] =$$

(A) 33   (B) 34   (C) 66   (D) 67   (E) 98

Solution:

$[X]$ denotes the greatest integer less than or equal to X.

$$\left[\frac{1}{3}\right] = 0, \ \left[\frac{1}{3}+\frac{1}{99}\right] = 0, \ \left[\frac{1}{3}+\frac{2}{99}\right] = 0, \ , \ \left[\frac{1}{3}+\frac{65}{99}\right] = 0$$

(for $[X]$ to be 1, X must be ≥ 1)

$$\left[\frac{1}{3}+\frac{66}{99}\right] = 1, \ \left[\frac{1}{3}+\frac{67}{99}\right] = 1, \ , \ \left[\frac{1}{3}+\frac{98}{99}\right] = 1$$

$$\left[\frac{1}{3}\right] + \left[\frac{1}{3}+\frac{1}{99}\right] + \left[\frac{1}{3}+\frac{2}{99}\right] + \cdots + \left[\frac{1}{3}+\frac{98}{99}\right] = 0 + 0 + \cdots 66 \text{ terms} + 1 + 1 + \cdots 33 \text{ terms} = 33$$

Hence, option A.

6. ABCD is a square. P is the midpoint of AB. The line passing through A and perpendicular to DP intersects the diagonal at Q and BC at R. If AB = 2 then PR = _____ ?

A $\dfrac{1}{2}$

B $\dfrac{3}{2}$

C 2

(D) 1

(E) None of the above

Solution:

The above image can be drawn from the data given.

Consider ΔAQD,

m∠ADP + m∠DAM = 90°

Also,

m∠DAM + m∠MAP = 90°

∴ m∠ADP = m∠MAP

∴ By A-A-A test of similarity, ΔADP ∼ ΔARB

$$\frac{AB}{AD} = \frac{BR}{AP} = \frac{BR}{1} = 1$$

∴ BR = 1

Consider ΔPBR,

BR = 1 and PB = 1

By Pythagoras theorem,

$PR^2 = BR^2 + PB^2$

∴ $PR = \sqrt{2}$

Hence, option C.

7. ABCD is a rectangle with AD = 10. P is a point on BC such that APD = 90°. If DP = 8 then the length of BP is

(A) 6.4   (B) 5.2   (C) 4.8   (D) 3.6   (E) None of the above

Solution:
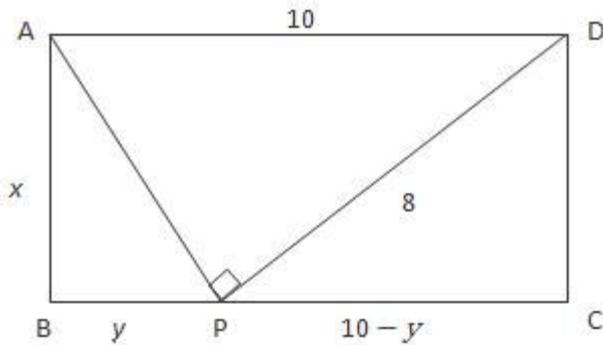
Consider ΔAPD:

By Pythagoras" theorem, $AD^2 = AP^2 + PD^2$

   $AP = 6$

Consider ΔABP:

By Pythagoras" theorem, $AB^2 + BP^2 = AP^2$

   $x^2 + y^2 = 36$ … (i)

Consider ΔDPC:

By Pythagoras" theorem, $DC^2 + PC^2 = DP^2$

   $x^2 + (10 - y)^2 = 64$

   $x^2 + y^2 + 100 - 20y = 64$

From equation (i), we get,

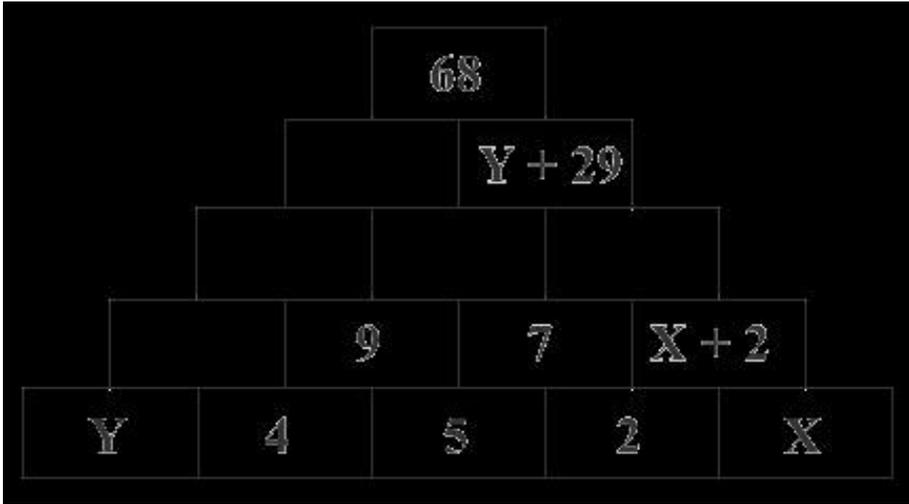$36 + 100 - 64 = 20y$

   $y = 3.6$

Hence, option D.

8. In the figure, number in any cell is obtained by adding two numbers in the cells directly below it. For example, 9 in the second row is obtained by adding the two numbers 4 and 5 directly below it. The value of $X - Y$ is
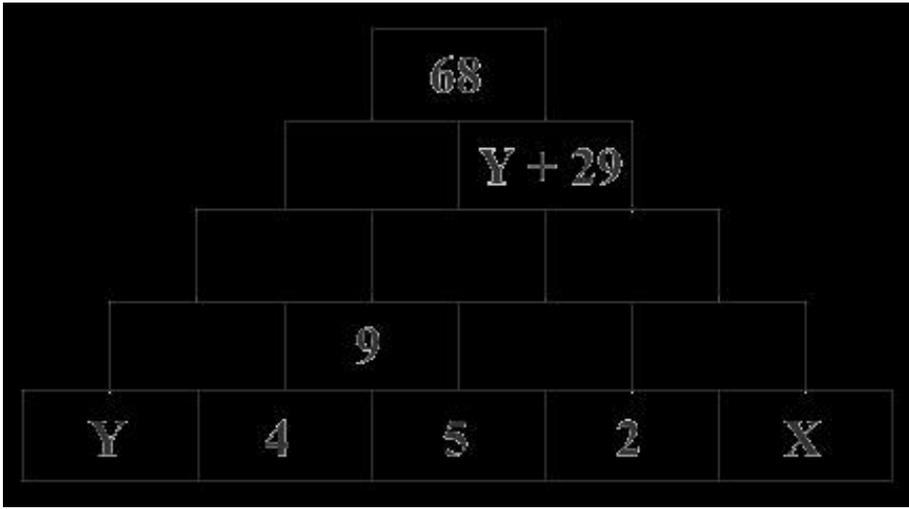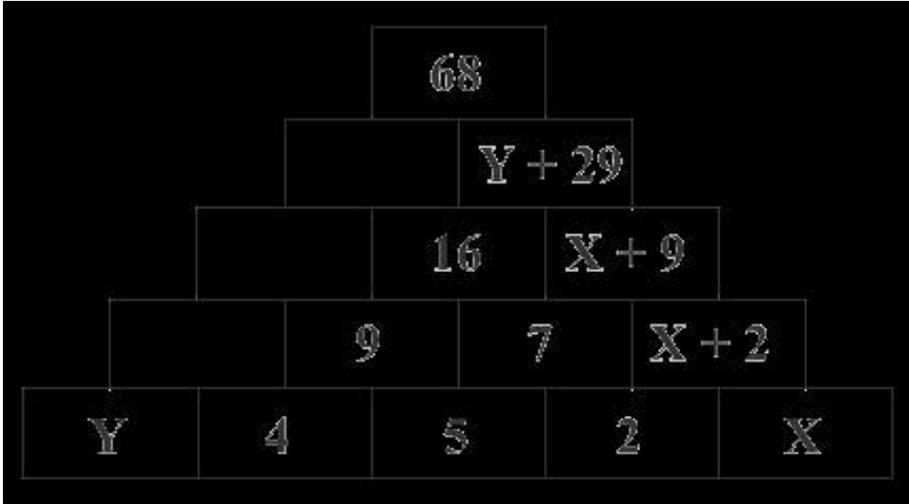
(A) 2   (B) 3   (C) 4   (D) 5   (E) 6

Solution:

Working upward to the second row from the bottom by filling the cells above 5 and 2, and 2 and X, we get,

Similarly, working up to the 3rd row from the bottom, we get,

If we go further up, we get,

X + 9 + 16 = Y + 29

X + 25 = Y + 29

∴ X − Y = 4

Hence, option C.

Directions for Questions 9 and 10:

In second year, students at a business school can opt for Systems, Operations or HR electives only. The number of girls opting for Operations and the number of boys opting for Systems elective is 37. Twenty two students opt for operations elective. Twenty girls opt for Systems and Operations electives. The number of students opting for Systems elective and the number of boys opting for Operations electives is 37. Twenty-five students opt for HR electives.

9. The number of students in the second year is

(A) 73   (B) 74   (C) 75   (D) 76   (E) 77

Solution:

	Systems	Operations	HR
Boys	a	c	
Girls	b	$20-b$	
Students	d	22	25

From the given data, we have,

$20 - b + a = 37$ … (i)

$c + d = 37$ … (ii)

$a + b = d$ … (iii)

$c - b = 2$ … (iv)

On solving these equations, we get,

$a = 23$, $b = 6$, $c = 8$ and $d = 29$

∴ Total number of students in second year = 29 + 25 + 22 = 76

Hence, option D.

10. If 20% of the girls opt for HR electives, then the total number of boys in the second year is

(A) 54   (B) 53   (C) 52   (D) 51   (E) 50

Solution:

	Systems	Operations	HR
Boys	23	8	x
Girls	6	14	y
Students	29	22	25

Now, y = 20% of total number of girls.

   16 + 4 = 20 = 80% of total number of girls.

   Total number of girls = 25

As total number of students = 76 and total number of girls = 25

   Total number of boys = 76 – 25 = 51

Hence, option D.

Question Nos. 11-12 are followed by two statements labeled as I and II. You have to decide if these statements are sufficient to conclusively answer the question. Choose the appropriate answer from options given below:

A. If statement I alone is sufficient to answer the question.

B. If statement II alone is sufficient to answer the question.

C. If statement I and statement II together are sufficient but neither of the two alone is sufficient to answer the question.

D. If either statement I or statement II alone is sufficient to answer the question.
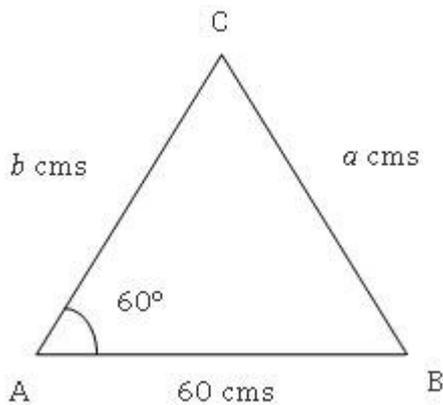
E. Both statement I and statement II are insufficient to answer the question.

11. The base of a triangle is 60 cms, and one of the base angles is 60°. What is length of the shortest side of the triangle?

   I.   The sum of lengths of other two sides is 80 cms.
   II.   The other base angle is 45°.

Solution:

Let AB be the base of the triangle, let a be the length of side BC and b be the length of side AC.

Using statement I:

$a + b = 80$

$a = 80 - b$ ...(i)

According to the cosine rule:

$$\cos = \frac{{}^2 + {}^2 - {}^2}{2 \cdot {}^2}$$

$$\cos 60 = \frac{60^2 + {}^2 - {}^2}{120}$$

$$\frac{1}{2} = \frac{3600 + {}^2 - {}^2}{120}$$

$$60 = 3600 + {}^2 - {}^2 \quad \text{(ii)}$$

Substituting equation (i) in (ii), we get,

$$60 = 3600 + {}^2 - (80 -)^2$$

$60b = 3600 + b^2 - (b^2 + 6400 - 160b)$

$60b = 160b - 2800$

$b = 28$

From equation (i), we get,

$a = 52$

Using statement I alone, the length of the shortest side can be determined.

Using statement II:

B = 45°

C = 75°

According to the sine rule:

$$\frac{\overline{\quad}}{\sin} = \frac{\overline{\quad}}{\sin} = \frac{\overline{\quad}}{\sin}$$

$$60$$

$$\frac{\overline{\quad}}{\sin 60} = \frac{\overline{\quad}}{\sin 45} = \frac{\overline{\quad}}{\sin 75}$$

Values of all the sides can be determined.

Statement II alone is also sufficient to answer the question.

The question can be answered using either of the statements alone.

Hence, option D.

12. A, B, C, D, E and F are six integers such that E < F, B > A, A < D < B. C is the greatest integer. Is A the smallest integer?

   I.   E + B < A + D
   II.   D < F

Solution:

It is given that A < D < B, E < F and also C is the greatest integer.

To determine if A is the smallest integer, we need to find the relation between A and E

Using statement I:

E + B < A + D

E + B can be less than A + D only when E is less than A (B > D .

A is not the smallest integer.

Statement I alone is sufficient to answer the question.

Using statement II:

D < F

This statement is also not sufficient to determine the relation between A and E

Statement II alone is not sufficient to answer the question.

Hence, option A.

13. Rajiv is a student in a business school. After every test he calculates his cumulative average. QT and OB were his last two tests. 83 marks in QT increased his average by 2. 75 marks in OB further increased his average by 1. Reasoning is the next test, if he gets 51 in Reasoning, his average will be _____?

(A) 63   (B) 62   (C) 61   (D) 60   (E) 59

Solution:

Let the total marks of Rajiv and the number of tests he gave before giving QT be x and n respectively.

83 marks in QT increased his average by 2,

$$\frac{(x + 83)}{(n + 1)} - \ldots + 2 = \ldots \quad \text{(i)}$$

75 marks in OB further increased his average by 1,

$$\frac{(x + 83)}{(n + 1)} + 1 = \frac{(x + 83 + 75)}{(n + 2)} \quad \text{(ii)}$$

He gets 51 in his next test – Reasoning,

$$\text{Average} = \frac{(x + 158 + 51)}{(n + 3)} \quad \text{(iii)}$$

Solving equations (i) and (ii), we get the value of $n = 10$ and $x = 610$

From (iii), we get Average = 63

Hence, option A.

Alternatively,

Let Rajiv"s average marks and the number of tests he gave before giving QT be A and n respectively. Now, since the average of n tests is A, let"s assume that in each of the n tests, Rajiv scored A marks.

83 marks in QT increased his average by 2. This will be possible if for each of the $(n + 1)$ tests, Rajiv scores $(A + 2)$ marks. However, we already know that for the first n tests, he only scored A marks. So, to compensate this, he should have scored $[(A + 2) + 2n]$ marks.

$A + 2 + 2n = 83$

$A + 2n = 81$ … (i)

Similarly, 75 marks in OB further increased his average by 1. This will be possible if for each of the $(n + 2)$ tests, Rajiv scores $(A + 3)$ marks. However, we already know that for the first n tests, he only scored A marks and for the second-last test (QT), he scored 83 marks. So, to compensate this, he should have scored $[(A + 3) + 3n + (A + 3 - 83)]$ marks.

$(A + 3) + 3n + (A + 3 - 83) = 75$

$2A + 3n = 152$ **Set D**

ii

Solving equation (i) and (ii) simultaneously, we get, $n = 10$ and $A = 61$

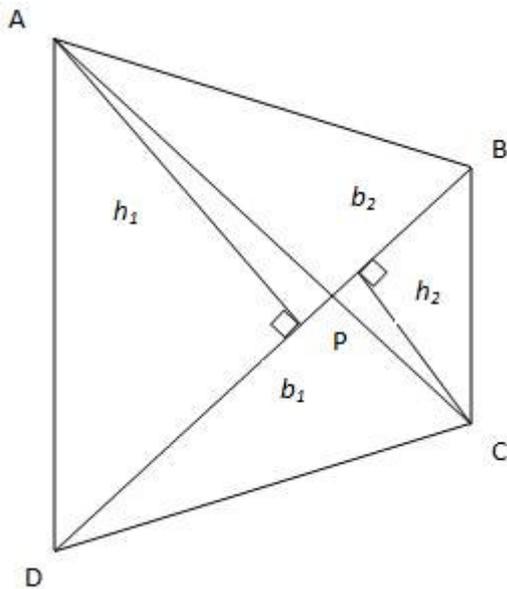Hence, average after Rajiv scores 51 in Reasoning is given by,

Average = $\dfrac{610 + 83 + 75 + 51}{13} = \dfrac{819}{13} = 63$

Hence, option A.

14. ABCD is a quadrilateral. The diagonals of ABCD intersect at the point P. The area of the triangles APD and BPC are 27 and 12 respectively. If the areas of the triangles APB and CPD are equal then the area of triangle APB is

(A) 21   (B) 18   (C) 16   (D) 15   (E) 12

Solution:

Let the height of the $\triangle$ APD be h_1 and the height of $\triangle$ BPC be h_2

Let the length of DP be b_1 and the length of BP be b_2

$$\dfrac{A(\triangle APD)}{A(\triangle BPC)} = \dfrac{h_1 \times \ _1}{h_2 \times \ _2} = \dfrac{27}{12} \qquad \text{(i)}$$

Now, A($\triangle$ APB) = A($\triangle$ CPD)

$h_1 \times b_2 = h_2 \times b_1$

$\dfrac{h_1}{h_2} = \ _2$

From (i), we get,

$$\frac{(\quad_1)2}{(\quad_2)2} = \frac{27}{12}$$

$$\frac{\quad_1}{\quad_2} = \frac{27}{12}$$

Now,

$$\frac{A(\triangle APD)}{A(\triangle APB)} = \frac{h_1 \times \quad_1}{h_1 \times \quad_2}$$

$$\frac{27}{A(\triangle APB)} = \frac{27}{12}$$

$$A(\triangle APB) = \frac{27}{12}$$

$$A(\triangle APB) = 18$$

Hence, option B.

15. If F(x, n) be the number of ways of distributing "x" toys to "n" children so that each child receives at the most 2 toys then F(4, 3) = _____?

(A) 2   (B) 3   (C) 4   (D) 5   (E) 6

Solution:

We have to find the number of ways in which 4 toys can be distributed to 3 children so that each child receives at the most 2 toys.

There are two possible cases:

Case 1: Two of them receive 2 toys each and one of them doesn"t get any toy.

There are 3 possible ways to distribute the toys in this case i.e., the three possible ways of selecting the child who will not get any toy.

Case 2: Two of them receive 1 toy each and one of them receives 2 toys.

Again there are 3 possible ways to distribute the toys in this case i.e., the three possible ways of selecting the child who will get 2 toys.

There are a total of 6 possible ways.

Hence, option E.

16. In a cricket match, Team A scored 232 runs without losing a wicket. The score consisted of byes, wides and runs scored by two opening batsmen: Ram and Shyam. The runs scored by the two batsmen are 26 times wides. There are 8 more byes than wides. If the ratio of the runs scored by Ram and Shyam is 6:7, then the runs scored by Ram is

(A) 88   (B) 96   (C) 102   (D) 112   (E) None of the above

Solution:

Let the number of runs scored by byes, wides and runs be x, y and z respectively.

   $x + y + z = 232$ …(i)

   The runs scored by the two batsmen are 26 times the wides

   $z = 26y$ …(ii)

   There are 8 more byes than wides

   $x = y + 8$ …(iii)

Substituting equations (iii) and (ii) in equation (i), we get,

$y = 8$

   $z = 208$

   The runs scored by Ram and Shyam were in the ratio 6 : 7

Let the runs scored by Ram be $6r$ and by Shyam be $7r$.

   $13r = 208$

   $r = 16$

   Runs scored by Ram is 96.

Hence, option B.

17. Let X = {a, b, c} and Y = {l, m}. Consider the following four subsets of X × Y.

F_1 = {(a, l), (a, m), (b, l), (c, m)}

F_2 = {(a, l), (b, l), (c, l)}

F_3 = {(a, l), (b, m), (c, m)}

F_4 = {(a, l), (b, m)}

Which one, amongst the choices given below, is a representation of functions from X to Y?

 (A) F_1, F_2 and F_3 (B) F_2, F_3 and F_4 (C) F_2 and F_3 (D) F_3 and F_4 (E) None of the above

Solution:

   We are supposed to find the representation of functions from X to Y,

   X will be considered as the domain and Y will be considered as the range.

We will consider functions satisfying only many-to-one and one-to-one relationships.

In F1, a is paired with l and m, it satisfies one-to-many relationship and hence is not a representation of function from X to Y.

Elements in F_2 only satisfy many-to-one relationship and hence F_2 is valid.

Elements in F_3 satisfy one-to-one and many-to-one relationship and hence F_3 is valid.

Elements in F_4 only satisfy one-to-one relationship and hence F_4 is valid.

F_2, F_3 and F_4 are representation of functions from X to Y.

Hence, option B.

Questions 18 - 20: A, B, C, D, E and F are six positive integers such that

B + C + D + E = 4A

C + F = 3A

C + D + E = 2F

F = 2D

E + F = 2C + 1

If A is a prime number between 12 and 20, then

18. The value of C is

(A) 23   (B) 21   (C) 19   (D) 17   (E) 13

Solution:

It is given
that:

B + C + D + E = 4A   … (i)

C + F = 3A   … (ii)

C + D + E = 2F   … (iii)

F = 2D   … (iv)

E + F = 2C + 1   … (v)

From equations (iii) and (iv), we get,

C + E = 3D   … (vi)

From equations (iv) and (v) we get,

E = 2C   2D + 1   … (vii)

3C – 2D + 1 = 3D

3C + 1 = 5D   … (viii)

From equation (iv) we get 3C + 1 = 5F/2

(6C + 2)/5 = F   … (ix)

From equations (ix) and (ii) we get,

11C + 2 = 15A   … (x)

It is given that A is a prime number between 12 and 20.

A can have the values 13 or 17 or 19

A, B, C, D, E and F are all positive integers.

From equation (x), we get integer value for C only when A is 17.

A = 17 and C = 23

Substituting the value of C in equation (ix), we get,

F = 28

From equation (viii), we get D = 14

From equation (vii), we get E = 19

And from equation (i), we get B = 12

The value of C is 23,

Hence, option A.

19. The value of F is

(A) 14   (B) 16   (C) 20   (D) 24   (E) 28

Solution:

From the solution of the first question of the set we get that the value of F is 28

Hence, option E.

20. Which of the following must be true?

(A) D is the lowest integer and D = 14

(B) C is the greatest integer and C = 23

(C) B is the lowest integer and B = 12

(D) F is the greatest integer and F = 24

(E) A is the lowest integer and A = 13

Solution:

Referring to the solution of the first question of the set, we get that only the statement:

„B is the lowest integer and B = 12" is true

Hence, option C.

. For each > 1, sequence A is defined by $A_0 = 1$ and A $=$ $+$ -1 A $_{-1}$ for ≥ 1.

For how many integer values of *p*, 1000 is a term of the sequence?

(A) 8   (B) 7   (C) 5   (D) 4   (E) None of the above

Solution:

We have, $A_0 = 1$

And A $=$ $+ -1$ A $_{-1}$ for ≥ 1

$_1 =$ $+ -1 \times$ $_0 =$ $- 1$

Now, $A_2 = 2$ $+ -1$ $2 \times A_1 = 2$ $+$ $- 1 = 3$ $- 1$

Also, $A_3 = 3$ $+ -1$ $3 \times A_2 = 3$ $- 3$ $- 1 = 1$

Also, $A_4 = 4$ $+ -1$ $4 \times A_3 = 4$ $+ 1 = 4$ $+ 1$

, $_5 = 5$ $+ -1$ $5 \times$ $_4 = 5$ $- 4$ $+ 1 =$ $- 1$

Also, $A_6 = 6$ $+ -1$ $6 \times A_5 = 6$ $+$ $- 1 = 7$ $- 1$

Also, $A_7 = 7$ $+ -1$ $7 \times A_6 = 7$ $- 7$ $- 1 = 1$

Also, $A_8 = 8$ $+ -1$ $8 \times A_7 = 8$ $+ 1$

Also, $A_9 = 9$ $+ -1$ $9 \times A_8 = 9$ $- 8$ $+ 1 =$ $- 1$

Also, $A_{10} = 10$ $+ -1$ $10 \times A_9 = 10$ $+$ $- 1 = 11$ $- 1$

1000 can be obtained for p 1, $3p$ 1, $7p$ 1, $11p$ 1, $15p$ 1, $19p$ 1, $23p$ 1 and so on.

We find out divisors of 1001 = 1, 7, 11, 13, 77, 91, 143, 1001

Out of these divisors, only $7p - 1$, $11p - 1$, $91p - 1$, $143p - 1$ and $1001p - 1$ falls under these sequence thus resulting into 1000.

So there are 5 values of p for which sequence will result into 1000.

Hence, option C.

. If $0 < \quad < 1$, then roots of the equation $(1 - \quad) \quad 2 + 4 \quad + \quad = 0$ are

(A) Both 0
(B) Imaginary
(C) Real and both positive
(D) Real and of opposite sign
(E) Real and both negative

Solution:

We have,

$(1 - \quad) \quad 2 + 4 \quad + \quad = 0$

$= 42 - 4 \times \quad 1 - \quad = 16 - 4 \quad + 4 \quad 2$

> 0 for ' ' lying between 0 and 1.

Roots are real and after checking for the arbitrary values of p (say 0.5), we get that both roots will be negative.

Hence, option E.

23. If $x > 0$, then minimum value of

$$\frac{\left(+\frac{1}{}\right)^6 - \left(\quad - \quad 6 + \frac{1}{}\right)}{\left(\frac{1}{}+\right)^3 + \left(\frac{6}{} - 2\right)} \text{ is}$$

(A) 6   (B) 3   (C) 2   (D) 1   (E) None of the above

Solution:

We have,

Set D

For $\quad > 0$, the minimum value of $\qquad$ will be 2 for $\quad = 1$

$+ \frac{1}{}$

$$\frac{+^{1 \ 6} - 6 +^1}{\dfrac{-}{+^{1 \ 3} + 3 +^1} - 6 +^2} = \frac{+^{1 \ 6} - 3 +^{1 \ 2}}{\dfrac{-}{3 + 3 +^1} - \dfrac{3}{3}} = +^{1 \ 3} - 3 +^{1}_{3}$$

$$+^{1}_{1 \ 3}{}^{3} \dfrac{-}{+^1} - 3 \quad 3 = 3 \qquad \dfrac{+^1}{1} + \dfrac{-}{-} \dfrac{3}{-}$$

The minimum value of 3 $\qquad = 3 \times 2 = 6$ for $\qquad = 1$

$+^1$

Hence, option A.

24. The number of possible real solution(s) of y in equation $y^2 - 2y\cos x + 1 = 0$ is

(A) 0   (B) 1   (C) 2   (D) 3   (E) None of the above

Solution:

We have,

$y^2 - 2y\cos x + 1 = 0$

$\Delta = 4\cos^2 x - 4$

For real values of y, we should have Δ greater than or equal to 0.

But here, Δ cannot be greater than 0.

$\therefore \Delta = 0$ for the real values of y

$4\cos^2 x - 4 = 0$ gives $\cos x = \pm 1$

$\cos x = 0°$ or $180°$
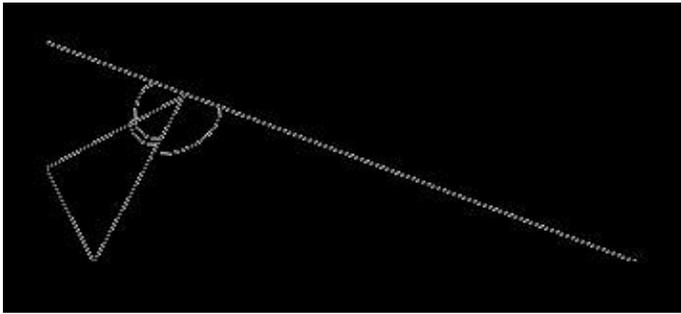
So for these 2 values of x, we get 2 real solutions.

Hence, option C.

25. In a triangle ABC, AB = 3, BC = 4 and CA = 5. Point D is the midpoint of AB, point E is on segment AC and point F is on segment BC. If AE = 1.5 and BF = 0.5, then $\angle$DEF =

(A) 30°   (B) 45°   (C) 60°   (D) 75°   (E) Cannot be determined

Solution:

We know that $\angle$ABC = $\angle$FBD = 90° as 3-4-5 form a Pythagorean triplet. So, we have,

Let ∠DEF = y, ∠AED = x, and ∠FEC = z

∠AED + ∠DEF + ∠FEC = $x + y + z = 180°$ … (i)

In ΔAED, AE = AD = 1.5 and in ΔCEF, CE = CF = 3.5

So ∠AED = ∠ADE = x and ∠CEF = ∠CFE = z

In quadrilateral BDEF, ∠DEF + ∠EFB + ∠FBD + ∠BDE = 360°

$y + (180° − z) + 90° + (180° − x) = 360°$

$450° + y − (x + z) = 360°$

$450° + y − (180° − y) = 360°$ … From (i)

$2y = 90°$

$y = 45°$

Hence, option B.

. If $3^{\sqrt{x+2}} + 2^{\sqrt{x+2}} + \dfrac{1}{\sqrt{x+2}} = 4$, $x \neq -2$, then x is

(A) $\dfrac{7}{52}$

B $\dfrac{52}{7}$

(C) $\dfrac{8}{56}$

D $\dfrac{56}{7}$

(E) None of the above

Solution:

$3^{\sqrt{x+2}} + 2^{\sqrt{x+2}} + \dfrac{1}{\sqrt{x+2}} = 4$

Putting $y = x + 2$, we get,

$3 \quad + \dfrac{}{} = 4 \quad - 2$ (i)

$4 \quad \tiny 1$

Putting $\quad + 2$, we get,

$= \tiny 1$

$= 1$

$- 2$

$3 \tiny\underline{\quad 1} \quad - \quad 1 - 2$

$+ 4 \quad - \quad = 4$ (ii)

Adding (i) and (ii), we get,

$7 \quad + \quad \tiny 1 \quad 1 - 2$

$\dfrac{}{} = 4 \quad - 2 + 4$

$\tiny 1 4 \quad 1 - 2$

$\pm \dfrac{}{} = 7 \quad - 2 +$

Putting this value in equation (ii), we get,

$12 \quad 1 - 2$

$7 \quad - 2 + \quad + \quad = \quad 1 - 2$ iii

$= 4 \; 1 - \dfrac{4}{12}$

2

$\dfrac{-}{} 7 \quad - 2 +$

Putting $y = 4$, we get,

$4 = -\dfrac{52}{7}$

Hence, option E.

$\dfrac{}{} \qquad \dfrac{}{}$

Alternatively,

You could have substituted $x = 2$ and $x = -7/4$ in the given equation to get,

$3 \quad 4 + \quad 4 = 8$

$4 \quad \tiny 1$

$\underline{3} \qquad \dfrac{}{} \tiny 1$

4 $+ 4$ $4 = -7$

Solving these two equations simultaneously, we get f $4 = -\dfrac{52}{1}$ 53

Hence, option E.

Set D

7 <u>and f</u> $_4$ $=_7$

27. A train left station X at *A* hour *B* minutes. It reached station Y at *B* hour *C* minutes on the same day, after travelling *C* hours *A* minutes (clock shows time from 0 hours to 24 hours). Number of possible value(s) of *A* is

(A) 0   (B) 1   (C) 2   (D) 3   (E) None of the above

Solution:

A hours + *C* hours = *B* hours   … (i)

    A, *C* and *B* cannot have values greater than or equal to 24

    B minutes + *A* minutes = *C* minutes   … (ii)

Looking at the two equations, we get that no value of *A* satisfies both the equations.

Hence, option A.

28. Two circles of radius 1 cm touch at point P. A third circle is drawn through the points A, B and C such that PA is the diameter of the first circle, and BC - perpendicular to AP - is the diameter of the second circle. The radius of the third circle is
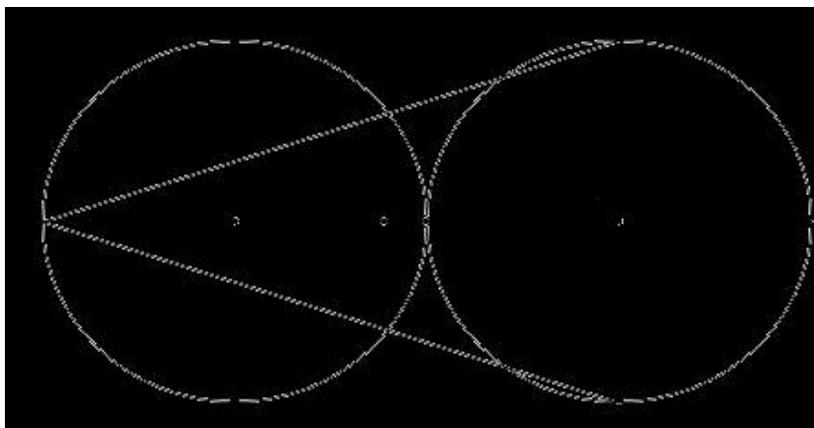
A $\dfrac{9}{5}$

B $\dfrac{7}{4}$

C $\dfrac{5}{3}$

D $\dfrac{10}{2}$

(E) 2

Solution:

As third circle is passing through the points A, B and C, the center (say G) of the third circle must lie on the segment AD.

Let AG = BG = CG = x cm

$AG^2 = BG^2$

$x^2 = BD^2 + GD^2$

$x^2 = 1^2 + (3 - x)^2$

Solving this, we get,

$= \dfrac{5}{3}$ cm

Hence, option C.

Answer the question nos. 29 to 33 on the basis of the data given below.

Area/Month		January	February	March
Sales in Bistupur				
	Television	900	1050	1200
	Ipods	15750	16800	17850
Sales in Sakchi				
	Television	1800	2100	2400
	Ipods	9450	10080	10710
Sales in Kadma				
	Television	6300	7350	8400
	Ipods	6300	6720	7140

Units ordered=Units Sold + Ending Inventory − Begining Inventory
All sales figure are in Rupees thousand
All other things are constant.
All Rupees figures are in thousands.

29. In a period from January to March, Jamshedpur Electronics sold 3150 units of Television, having started with a beginning inventory of 2520 units and ending with an inventory of 2880. What was the value of order placed (Rupees in thousands) by Jamshedpur Electronics during the three months period? [Profits are 25% of cost price, uniformly.]

(A) 2808   (B) 26325   (C) 22320   (D) 25200   (E) 28080

Set D

Solution:

Units ordered = Units sold + Ending Inventory – Beginning Inventory

            = 3150 + 2880 – 2520

             = 3510

Total sales of Television in Rs. Thousand = 900 + 1800 + 6300 + 1050 + 2100 + 7350 + 1200 + 2400 + 8400 = 31500

Sales Price per unit of Television in Rs. Thousand = 31500/3150 = 10

Profits are 25% of the cost price.

    Sales Price = Cost Price + Profits = Cost Price + 0.25 × Cost Price = 1.25 × Cost Price

    Cost Price per unit of Television = Sales Price per unit/1.25 = 10/1.25 = 8

    The value of the order placed in Rs. Thousand = Units ordered × Cost Price per unit = 3510 × 8 = 28080

Hence, option E.

30. What was the total value of surcharge paid - at the rate of 14% of sales value - by Jamshedpur Electronics, over the period of 3 months?

(A) 18522   (B) 18548   (C) 18425   (D) 18485   (E) Cannot be determined

Solution:

Total sales of Television and IPods in Rs. Thousand = 31500 + 100800 = 132300

But the surcharge paid is 14% of the total sales

    Surcharge paid in Rs. Thousand = 132300 × 0.14 = 18522

Hence, option A.

31. 10% of sales price of IPods and 20% of sales price of Television contribute to the profits of Jamshedpur Electronics. How much profit did the company earn in the month of January from Bistupur and Kadma from the two products?

(A) 513   (B) 4410   (C) 3645   (D) 5230   (E) 5350

Solution:

In the month of January,

Sales of Television in Rs. Thousand = 22050

And sales of IPods in Rs. Thousand = 7200

Hence,

20% of the sales of Television in Rs. Thousand = 7200 × 0.20 = 1440

And 10% of the sales of IPods in Rs. Thousand = 22050 × 0.10 = 2205

   Profit earned by the company in the month of January from Bistupur and Kadma

= 2205 + 1440

= 3645

Hence, option C.

32. In the period from January to March, consider that Jamshedpur Electronics ordered 7560 units of IPods for all three areas put together. What was unit sales price of IPod during the period? The ending inventory was 6120 units and the beginning inventory stood at 5760.

 (A) 14.00   (B) 14.65   (C) 14.80   (D) 13.00   (E) 13.60

Solution:

Units ordered = Units sold + Ending Inventory – Beginning Inventory

7560 = Units Sold + 6120 – 5760

   Units sold = 7200

   Sales price of IPod during this 3 month period in Rs. Thousand = 100800/7200 = 14

Hence, option A.

33. For Jamshedpur Electronics Beginning inventory was 720 for Televisions and 1800 for IPods and Ending inventory was 840 for Televisions and 1920 for IPods in the month of January. How many units of Televisions and IPods did Jamshedpur Electronics order for the month of January?

Additional Data: In the month of February, 1050 units of Television and 2400 units IPods were sold in all three areas put together.

(A) 1020, 2270

(B) 1020, 2370

(C) 2270, 1030

(D) 1030, 2370

(E) 1020, 2280

Solution:

In a month of February, 1050 units of Television and 2400 units of IPods were sold in all three areas.

Sell price of Television per unit in Rs. Thousand = 10500/1050 = 10

And price of IPod per unit in Rs. Thousand = 33600/2400 = 14

This Price per unit is from a month of January.

No of Units of Television sold in the month of January = 9000/10 = 900

And no of Units of IPods sold in the month of January = 31500/14 = 2250

Now, Units ordered = Units sold + Ending Inventory – Beginning Inventory

For Television: Units ordered = 900 + 840 – 720 = 1020

For IPod: Units ordered = 2250 + 1920 – 1800 = 2370

Hence, option B.

34. Consider a sequence 6, 12, 48, 24, 30, 36, 42 … If sum of the first n terms of the sequence is 132, then the value of n is?

(A) 11　　　　(B) 13　　　　(C) 18　　　　(D) 22　　　　(E) 24

Solution:

6, 12, 48, 24, 30, 36, 42, …

From the fifth number onwards,

The ratio of each number and its preceding number in the series is of the form $\frac{5}{4}, \frac{6}{5}, \frac{7}{6}$, etc.

That is, $\frac{30}{24} = \frac{5}{4}, \frac{36}{30} = \frac{6}{5}, \frac{42}{36} = \frac{7}{6}$ and so on.

Also, the signs follow a pattern of −, −, +, +, −, −, +, +   and so on

So, continuing the series in this manner, we have,

6, 12, 48, 24,

30, 36, 42, 48,

54, 60, 66, 72,

78, 84, 90, 96, …

Except for the first 4 numbers in the series, each set of four numbers adds up to 24

(i.e. −30 − 36 + 42 + 48 = −54 − 60 + 66 + 72 = −78 − 84 + 90 + 96 = 24)

So, the sum of the series will progress in this way:

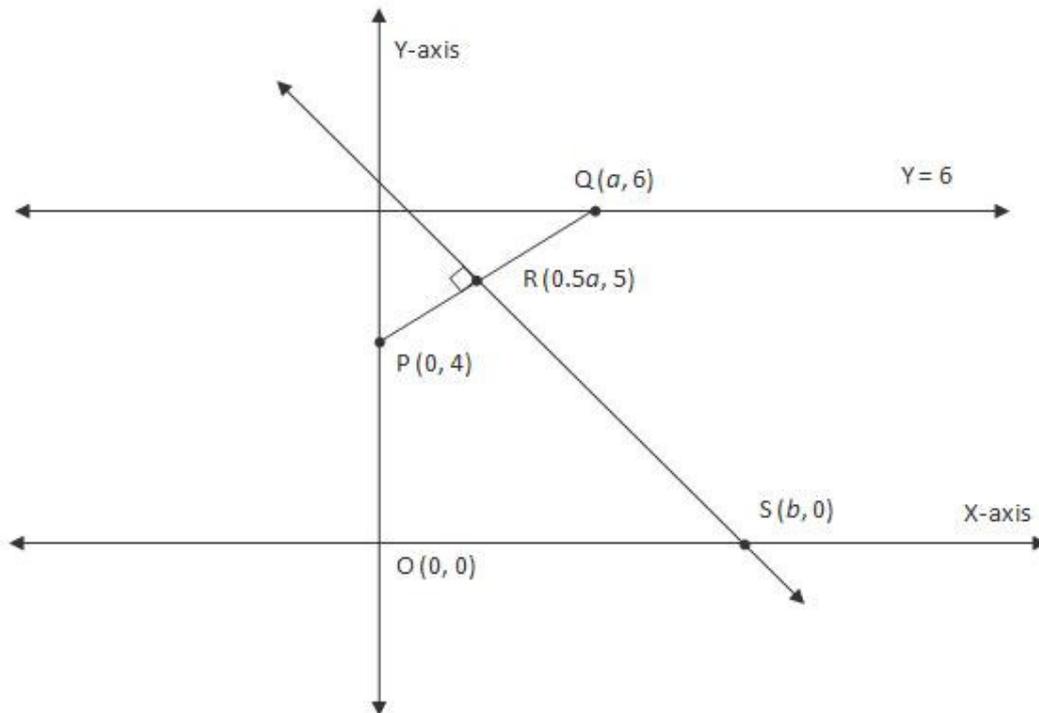(−6 − 12 + 48 + 24) + 24 + 24 + 24 + …

However, 54 + 24 + 24 + 24 = 126 and 54 + 24 + 24 + 24 + 24 = 150. Thus, the sum can never be 132.

Hence, no solution exists.

35. The co-ordinates of P and Q are (0, 4) and (a, 6), respectively. R is the midpoint of PQ. The perpendicular bisector of PQ cuts X-axis at point S(b, 0). For how many integers value(s) of "a", b is an integer?

(A) 4   (B) 3   (C) 2   (D) 1   (E) 0

Solution:

P (0, 4) and Q (a, 6)

Co-ordinates of midpoint of PQ, R will be (0.5a, 5).

Equation of line PQ is $-$ $_1$ $-$ $_1$ $- 0$ $\dfrac{-4}{}$

$_1-$ $_2=$ $_1-$ $_2= 0 -$ $\overset{=}{}4 - 6$

Equation of line PQ is $+ 4$ $\underline{}$

$= \overset{2}{}$

Equation of perdicular bisector of PQ will be 2 $+$

$= -$

As R is the midpoint of PQ, it will lie on the perpendicular bisector of PQ and S will also lie on this line.

Co-ordinates of both R and S will satisfy this equation.

Substituting the co-ordinates of S (b, 0) we get,

$$0 = \frac{}{2} +$$

$$-\ \overline{\ }$$

$$\frac{=}{\overline{2}} - \ \overline{\ }$$

Substituting the value of *c* and co-ordinates of R in the equation of the perpendicular to PQ, we get,

$$5 =$$

$$-\ \frac{\overline{\ \ \ \ \ }}{2\ \ \ 2^{+}2}$$
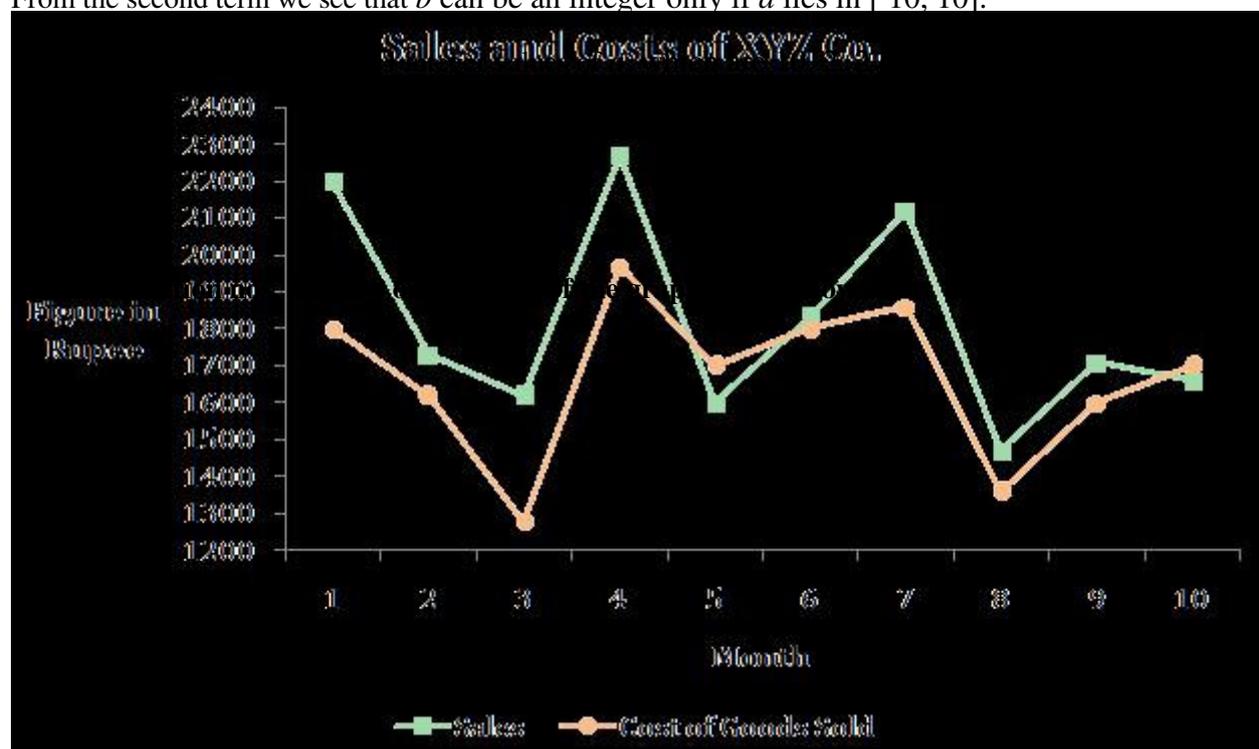
$$20 = \overline{a^{2} + 2ab}$$

$$= \frac{2}{2} + 20$$

$$10$$

$$=$$

$$2^{+}$$

Now, from the first term we can see that for *b* to be integer, *a* has to be even.
From the second term we see that *b* can be an integer only if *a* lies in [10, 10].

Sales and Costs of XYZ Co.

Figure in Rupees

Month

Sales   Cost of Goods Sold

36. In which month did the company earn maximum profits?

(A) 5   (B) 4   (C) 3   (D) 2   (E) 1

Solution:

The values in the table are approximate as it is difficult to figure out the exact values given in the graph.

Month	Sales	Cost	Profit
1	2200	1800	400
2	1750	1625	125
3	1625	1250	375
4	2250	1975	275
5	1700	1575	125
6	1825	1800	25
7	2100	1825	275
8	1450	1350	100
9	1700	1600	100
10	1650	1700	−50
	18250	16500	1750

As it can be seen from the table above, the maximum profit was earned in month 1.

Hence, option E.

37. In which month did the company witness maximum sales growth?

(A) 9   (B) 6   (C) 7   (D) 1   (E) 4

Solution:

It can be seen from the graph itself that the maximum growth in sales was observed in month 4.

Hence, option E.

38. What were average sales and costs of figures for XYZ Co. over the period of ten months?

(A) 1819, 1651
(B) 1919, 1751
(C) 1969, 1762
(D) 1719, 1601
(E) 1619, 1661

Solution:

As we are getting average to be 1825 and only option A has average of sale in 1800s, we can confidently say that option A is correct.

Hence, option A.

Answer question nos. 39 to 42 on the basis of the data given below.

Gender bias is defined as disproportion in percentage of drop-out rate of the two genders.

Year	Primary (I-V) Classes			Elementary (I-VIII) Classes			Secondary (I-X) Classes		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1996-97	39.7	40.9	40.2	54.3	59.5	56.5	67.3	73.7	70.0
1997-98	37.5	41.5	39.2	53.8	59.3	56.1	66.6	73	69.3
1998-99	40.9	41.3	41.5	54.2	59.2	56.3	64.5	69.8	66.7
1999-00	38.7	42.3	40.3	52.0	58.0	54.5	66.6	70.6	68.3
2000-01	39.7	41.9	40.7	50.3	57.7	53.7	66.4	71.5	68.6
2001-02	38.4	39.9	39.0	52.9	56.9	54.6	64.2	68.6	66
2002-03	35.8	33.7	34.8	52.3	53.5	52.8	60.7	65.0	62.6
2003-04	33.7	28.6	31.5	51.9	52.9	52.3	61.0	64.9	62.7
2004-05	31.8	25.4	29.0	50.4	51.2	50.8	60.4	63.8	61.9

Drop Out Rates, in percentage, at Primary, Elementary and Secondary Classes in India

39. Based on the data above, choose the true statement from the following alternatives:

A. Gender bias in primary education has consistently decreased over the years.

B. Gender bias decreases as students move from primary to secondary classes.

C. Total drop-out rate decreased consistently for primary classes children from 1996-97 to 2004-05.

D. Gender bias was consistently highest for secondary classes.

E. None of the above.

Solution:

As can be seen from the given table, none of the first four options is correct.

Hence, option E.

40. Assume that girls constituted 55% of the students entering school. In which year, as compared to the previous year, number of boys in secondary education would be more than the number of girls?

(A) 1996-97   (B) 1997-98   (C) 2000-01   (D) 1998-99   (E) 2001-02

Solution:

Data is ambiguous.

41. Suppose, every year 7,000 students entered Class I, out of which 45% were boys. What was the average number (integer value) of girls, who remained in educational system after elementary classes, from 1996-97 to 2004-05?

(A) 1475   (B) 1573   (C) 1743   (D) 1673   (E) 3853

Solution:

From the data given in the question we can form the table given above.

Hence, option D.

42. Suppose the total number of students in 1996-97 were 1000 and the number of students increased every year by 1000, up to 2004-05. The total number of drop outs from primary classes, from 1996-97 to 2004-05, were (approximately)?

(A) 18500   (B) 24500   (C) 19500   (D) 16000   (E) 11500

Solution:

From the data given in the question we can form the table given above.

As seen from the table option D is correct.

Hence, option D.

In the questions 43-44, one statement is followed by three conclusions.

Select the appropriate answer from the options given below.

(A) Using the given statement, only conclusion I can be derived.

(B) Using the given statement, only conclusion II can be derived.

(C) Using the given statement, only conclusion III can be derived.

(D) Using the given statement, all conclusions can be derived.

(E) Using the given statement, none of the three conclusions I, II and III can be derived.

43. $A_0, A_1, A_2, \ldots$ is a sequence of numbers with $A_0 = 1$, $A_1 = 3$ and $A_t = (t + 1)A_{(t-1)} {}^t (A_{(t-2)})$ for $t = 2, 3, 4, \ldots$

Conclusion I. $A_8 = 77$

Conclusion II. $A_{10} = 121$

Conclusion III. $A_{12} = 145$

Solution:

$A_0 = 1$ and $A_1 = 3$

$A_1 - A_0 = 2$

$A_2 = 3 \cdot 3 \cdot 2 \cdot 1 = 7$

$A_2 - A_1 = 4 = 2 \times 2 = 2 \times (A_1 - A_0)$

$A_3 = 4\ 7\ 3\ 3 = 19$

$A_3 - A_2 = 12 = 3 \times (A_2 - A_1)$

$A_4 = 5\ 19\ 4\ 7 = 67$

$A_4 - A_3 = 48 = 4 \times (A_3 - A_2)$

$A_5 = 307$

We can observe a pattern which is followed by the terms of the sequence,

According to the pattern we observe that the value of the terms is increasing and as 307 is greater than the given value of A_8, A_{10} and A_{12} in the conclusions, we can say that none of the conclusions can be derived.

Hence, option E.

44. *A, B, C* be real numbers satisfying $A < B < C$, $A + B + C = 6$ and $AB + BC + CA = 9$

Conclusion I. $1 < B < 3$

Conclusion II. $2 < A < 3$

Conclusion III. $0 < C < 1$

Solution:

$A + B + C = 6$

$C = 6 - A - B$

$AB + B(6 - A - B) + A(6 - A - B) = 9$

$AB + 6B - AB - B^2 + 6A - A^2 - AB = 9$

$A^2 + B^2\ 6B\ 6A + AB + 9 = 0$

$A^2 + A(B - 6) + B^2 - 6B + 9 = 0$

If we consider this equation in terms of *A*, then

$$= \frac{-6 + \sqrt{(-6)^2 - 4 \times 1 \times (2 - 6 + 9)}}{2 \times 1}$$

$$= -(-6) + \frac{\sqrt{+12}}{2}$$

-3^2

But we can also substitute A in terms of C initially.

We will get same equation in C and C will also have same roots.

To satisfy the condition $A < B < C$,

$$\frac{-6 - \sqrt{-3B^2 + 12}}{-3} < B < \frac{-6 + \sqrt{B^2 + 12}}{2}$$

$$-\frac{-6 - \sqrt{-3B^2 + 12}}{2} < 2B < -\frac{-6 + \sqrt{-3B^2 + 12}}{2}$$

Adding $(B - 6)$ to all sides,

$$-\sqrt{-3B^2 + 12} < 3B - 6 < \sqrt{-3B^2 + 12}$$

$$3B - 6 < \sqrt{-3B^2 + 12}$$

Squaring both sides, we get

$(3B - 6)^2 < 3B^2 + 12B$

$9B^2 - 36B + 36 < 3B^2 + 12B$

$12B^2 - 48B + 36 < 0$

$B^2 - 4B + 3 < 0$

$(B - 3)(B - 1) < 0$

$1 < B < 3$

Hence, Conclusion I is valid.

Conclusion II is not valid because if $A > 2$ then B and C also have to be greater than 2.

$A + B + C = 6$ is not satisfied.

Conclusion III is also not valid, because if $C < 1$ then A and B will also be less than 1.

$A + B + C = 6$ is not satisfied.

Only conclusion I can be derived.

Hence, option 1.

SECTION B: ANALYTICAL REASONING AND DECISION MAKING

Directions (Question No. 45-65): Each group of questions in this section is based on a set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. Choose the response that most accurately and completely answers each question and blacken the corresponding space on your answer sheet.

Question No 45 – 48: Six square states having equal area in a country are located in North-South direction in two columns next to each other. States are located in the given order, State 1, State 3, and State 5 are on the western side and State 2, State 4, and State 6 are on the eastern side. Within the six states, there are exactly four medical institutes, two management institutes, and two technical institutes. These eight institutions are located as follows:

No institution is in more than one of the states.

None of the states contain more than one management institute, and none contains more than one technical institute.

None of the states contain both a management institute and a technical institute.

Each management institute is located in a state that contains at least one medical institute.

The technical institutes are located in two states that do not share a common boundary.

State 3 contains a technical institute and State 6 contains a management institute.

45. Which one of the following could be true?

(A) State 1 contains exactly one technical institute

(B) State 1 contains exactly one medical institute

(C) State 2 contains exactly one management institute

(D) State 5 contains exactly one technical institute

(E) State 6 contains exactly one technical institute

Solution:

According to the given order the states can be represented as shown:

State 1	State 2
State 3	State 4
State 5	State 6

It is given that State 3 contains a technical institute.

Also the technical institutes are located in two states that do not share a common boundary.

State 1, 4 and 5 do not contain technical institutes.

Also it is given that State 6 contains a management institute.

It cannot contain a technical institute and must contain at least one medical institute.

The second technical institute can only be at State 2.

From the information given we get,

State 1	State 2 (technical)
State 3 (technical)	State 4
State 5	State 6 (management, medical)

Consider option A: State 1 contains exactly one technical institute

State 1 cannot contain a technical institute as it shares a common boundary with State 3 and the two technical institutes are located in states which do not have a common boundary.

Consider option B: State 1 contains exactly one medical institute

This statement can be true as State 1 can contain exactly one medical institute.

Consider option C: State 2 contains exactly one management institute

State 2 cannot contain a management institute as it contains a technical institute and it is given that none of the states contain both a management institute and a technical institute.

Consider option D: State 5 contains exactly one technical institute

State 5 cannot contain a technical institute as it shares a common boundary with State 3 and the two technical institutes are located in states which do not have a common boundary.

Consider option E: State 6 contains exactly one technical institute

State 6 cannot contain a technical institute as it contains a management institute and it is given that none of the states contain both a management institute and a technical institute.

Hence, option B.

46. A complete and accurate list of the states, any one of which could contain the management institute that is not in State 6, would be _____.

(A) 1, 4

(B) 2, 4

(C) 4, 5

(D) 1, 4, 5

(E) 1, 2, 4, 5

Solution:

State 2 and 3 contain a technical institute,

They cannot have a management institute.

But any of States 1, 4 and 5 can have a management institute.

Hence, option D.

47. If each of the six states contains at least one of the eight institutions, then which one of the following must be true?

(A) There is a management institute in State 1

(B) There is a medical institute in State 2

(C) There is a medical institute in State 3

(D) There is a medical institute in State 4

(E) There is a management institute in State 4

Solution:

Consider option A: There is a management institute in State 1

This statement can be true but not necessarily true as States 4 or States 5 can also contain the management institute.

Consider option B: There is a medical institute in State 2

State 2 cannot have medical institute as it contains technical institute and it is given that each of the six states contain at least one institute. If State 2 contained a technical and a medical institute, then one of the other states would go institution-less.

Consider option C: There is a medical institute in State 3

State 3 cannot have medical institute as it contains technical institute and it is given that each of the six states contain at least one institute. If State 3 contained a technical and a medical institute, then one of the other states would go institution-less.

Consider option D: There is a medical institute in State 4

Out of the two management institutes, State 6 contains one and the other can be in State 1, 4 or 5.

In all the three cases, there has to be a medical institute in States 1, 4 and 5, as each of the six states must contain at least one of the eight institutions.

This statement must be true.

Hence, option D.

48. If one of the states contains exactly two medical institutes and exactly one technical institute, then which combination of three states might contain no medical institute?

(A) 1, 3, 5
(B) 1, 4, 5
(C) 2, 3, 5
(D) 2, 4, 6
(E) 4, 5, 6

Solution:

It is given that one of the states contain exactly two medical institutes and exactly one technical institute,

There are two possible cases:

Case 1: State 2 contains two medical and one technical institute

Now, we have one management institute left which has to be clubbed with one medical institute.

In this case, option A is valid as State 4 may contain the remaining management and medical institutes.

It is possible for states 1, 3 and 5 to not contain any medical institutes.

Option B is not valid as one of states 1, 4 or 5 has to contain the remaining management and medical institute.

Options C and D are not valid as they contain State 2, which we have considered to be having two medical institutes.

Option E is not valid as it contains State 6, which we know contains 1 management and 1 medical institute.

Case 2: State 3 contains two medical and one technical institute

In this case, option 1 and option 3 contain State 3 which we have considered to be having 2 medical and 1 technical institute.

Option 2 is not valid as one of States 1, 4 or 5 has to contain the remaining management and medical

institute.

Option 4 and option 5 are not valid as they contains State 6 which we know contains 1 management and 1 medical institute.

In this case all the options are not valid.

Only the combination of States 1, 3 and 5 may not contain any medical institutes.

Hence, option A.

Question No 49 – 52: There are exactly ten stores and no other buildings on a straight street in Bistupur Market. On the northern side of the street, from West to East, are stores 1, 3, 5, 7, and 9; on the southern side of the street, also from West to East, are stores 2, 4, 6, 8, and 10. The stores on the northern side are located directly across the street from those on the southern side, facing each other in pairs, as follows: 1 and 2; 3 and 4; 5 and 6; 7 and 8; 9 and 10. Each store is decorated with lights in exactly one of the following colours: green, red, and yellow. The stores have been decorated with lights according to the following conditions:

No store is decorated with lights of the same colour as those of any store adjacent to it.

No store is decorated with lights of the same colour as those of the store directly across the street from it.

Yellow lights decorate exactly one store on each side of the street.

Red lights decorate store 4.

Yellow lights decorate store 5.

49. Which one of the following could be an accurate list of the colours of the lights that decorate stores 2, 4, 6, 8 and 10, respectively?

(A) Green, red, green, red, green

(B) Green, red, green, yellow, red

(C) Green, red, yellow, red, green

(D) Yellow, green, red, green, red

(E) Yellow, red, green, red, yellow

Solution:

According to the given conditions, the position of the stores on the street can be as shown below:

Northern side	1	3	5	7	9
Southern side	2	4	6	8	10

Now it is given that Red lights decorate store 4 and Yellow lights decorate store 5.

Thus, store 3 can neither have Red (being opposite store 4) nor Yellow lights (being next to store 5). It is therefore decorated using Green lights.

Similarly, store 6 cannot be decorated using either Red (being next to store 4) or Yellow lights (being opposite store 5). Thus, it also is lit using Green lights.

Since store 5 has Yellow lights and Yellow lights decorate exactly one store on each side of the street, hence stores 1, 3, 7 and 9 cannot be decorated with Yellow lights.

Moreover, store 1 cannot have Green lights either because it is next to store 3. So, store 1 has Red lights.

All this information can be illustrated as follows:

1 (RED)	3 (GREEN)	5 (YELLOW)	7 (NOT YELLOW)	9 (NOT YELLOW)
2 (NOT RED)	4 (RED)	6 (GREEN)	8 (NOT GREEN)	10

Looking at the options, we can immediately eliminate C and D as stores 4 and 6 are not Red and Green respectively.

Option A is not valid as it is given that Yellow light decorates one store on each side of the street.

Option B could be an accurate list of colours of the lights.

Option E is not valid as Yellow lights decorate exactly one store on each side of the street.

Hence, option B.

50. If green lights decorate store 7, then each of the following statements could be false EXCEPT:

(A) Green lights decorate store 2
(B) Green lights decorate store 10
(C) Red lights decorate store 8
(D) Red lights decorate store 9
(E) Yellow lights decorate store 2

Solution:

If green lights decorate store 7, then it cannot decorate store 9 as they are adjacent to each other.

Also, from the solution to the previous question, we know that store 9 cannot be decorated by Yellow lights.

Only Red lights can decorate store 9.

Option D is definitely true.

Hence, option D.

51. Which one of the following statements MUST be true?

(A) Green lights decorate store 10
(B) Red lights decorate store 1
(C) Red lights decorate store 8
(D) Yellow lights decorate store 8
(E) Yellow lights decorate store 10

Solution:

As seen from the solution of the first question in the set, it is clear that option B is definitely true.

Hence, option B.

52. Suppose that yellow lights decorate exactly two stores on the south side of the street and exactly one store on the north side. If all other conditions remain the same, then which one of the following statements MUST be true?

(A) Green lights decorate store 1
(B) Red lights decorate store 7
(C) Red lights decorate store 10
(D) Yellow lights decorate store 8
(E) Yellow lights decorate store 2

Solution:

Refer to the diagram given in the first question of the set.

Stores 4 and 6 are already decorated using Red and Green lights respectively.

    The southern-side stores lit with Yellow lights have to be from among the stores 2, 8 or 10.

    No store is decorated with lights of the same colour as those of any store adjacent to it,

    Yellow lights can decorate only one of stores 8 and 10.

    Store 2 has to be decorated with Yellow lights.

    Option E must be true.

Hence, option E.

Question No. 53-56. During a four-week period, each one of seven previously unadvertised products – G, H, J, K, L, M and O – will be advertised. A different pair of these products will be advertised each week. Exactly one of the products will be a member of two of these four pairs. None of the other products gets repeated in any pair. Further, the following constraints must be observed:

J is not advertised during a given week unless H is advertised during the immediately preceding week.

The product that is advertised twice is advertised during week 4 but is not advertised during week 3.

G is not advertised during a given week unless either J or O is also advertised that week.

K is advertised during one of the first two weeks.

O is one of the products advertised during week 3.

53. Which one of the following could be the schedule of the advertisements?

(A) Week 1: G, J; week 2: K, L; week 3: O, M; week 4: H, L
(B) Week 1: H, K; week 2: J, G; week 3: O, L; week 4: M, K
(C) Week 1: H, K; week 2: J, M; week 3: O, L; week 4: G, M
(D) Week 1: H, L; week 2: J, M; week 3: O, G; week 4: K, L
(E) Week 1: K, M; week 2: H, J; week 3: O, G; week 4: L, M

Solution:

Consider option A:

J cannot be advertised in week 1 as it is not advertised during a week unless H is advertised during the immediately preceding week.

    This schedule is not possible.

Consider option B:

This schedule satisfies all the given conditions

    It is possible.

Consider option C:

G is not advertised during a given week unless either J or O is also advertised that week.

    This schedule is not possible.

Consider option D:

K is to be advertised during one of the first two weeks.

Consider option E:

J is not advertised during a given week unless H is advertised during the immediately preceding week.

This schedule is not possible.

Hence, option B.

54. If L is the product that is advertised during two of the weeks, which one of the following is a product that MUST be advertised during one of the weeks in which L is advertised?

(A) G

(B) H

(C) J

(D) K

(E) M

Solution:

L is the product that is advertised during two of the weeks,

L has to be advertised once in the 4th week and once in the first two weeks.

There are two cases possible:

Case 1: L is advertised during the first and the fourth week

In this case, the only schedule possible is:

Week 1: H, L

Week 2: J, K

Week 3: G, O

Week 4: L, M

Case 2: L is advertised during the second and the fourth week

In this case the only schedule possible is:

Week 1: H, K

Week 2: J, L

Week 3: G, O

Week 4: M, L

In both the cases, M is definitely advertised in the same week as L.

Hence, option E.

55. Which one of the following is a product that could be advertised in any of the four weeks?

(A) H
(B) J
(C) K
(D) L
(E) O

Solution:

H cannot be advertised in the third week because if H is advertised in the third week then J has to be advertised in the fourth week along with G. Then one of G or J has to be the one which is advertised twice, which is not possible.

J cannot be advertised in the first week as J is not advertised during a given week unless H is advertised during the immediately preceding week.

K cannot be advertised in the third week because K has to be advertised in one of the first two weeks. If K is the product that is advertised twice, then it has to be advertised once in the first two weeks and once in the fourth week.

L can be advertised in any of the four weeks.

O is to be advertised only in week 3 and hence cannot be advertised in any of the four weeks.

Hence, option D.

56. Which one of the following is a pair of products that could be advertised during the same week?

(A) G and H
(B) H and J
(C) H and O
(D) K and O
(E) M and O

Solution:

Consider option A:
G and H cannot be advertised in the same week, since G is not advertised during a given week unless either J or O is also advertised that week.
    This option is not valid.

Consider option B:

H and J cannot be advertised together as J is not advertised during a given week unless H is advertised during the immediately preceding week and if H is advertised twice then it cannot be done in consecutive weeks.

This option is also not valid.

Consider option C:

If H and O are advertised together in the third week then G and J have to be advertised in the fourth week and then one of G or J is advertised twice, which is not possible.

This option is also not valid.

Consider option D:

K cannot be advertised in the third week with O as K has to be advertised in the first two weeks and it cannot be advertised twice since the repeated product is not advertised in the third week.

This option is not valid.

Consider option E:

M and O can be advertised together satisfying all the given conditions:

Week 1: H, K
Week 2: G, J
Week 3: O, M
Week 4: L, H or L, K
Hence, option E.

Question No. 57-61: In a game, "words" (meaningful or meaningless) consist of any combination of at least five letters of the English alphabets. A "sentence" consists of exactly six words and satisfies the following conditions:

The six words are written from left to right on a single line in alphabetical order. The sentence can start with any word, and successive word is formed by applying exactly one of three operations to the preceding word: delete one letter; add a letter; replace a one letter with another. At the most three of the six words can begin with the same letter. Except for the first word, each word is formed by a different operation used for the preceding word.

57. Which one of the following could be a sentence in the word game?

(A) Bzaeak blaeak laeak paeak paea paean
(B) Crobek croeek roeek soeek sxoeek xoeek
(C) Doteam goleam golean olean omean omman

(D) Feted freted reted seted seteg aseteg

(E) Forod forol forols forpls orpls morpls

Solution:

In option A, the first word "Bz…" is changed to "bl…". This is not in alphabetical order.

In option C, "Doteam" cannot be changed to "goleam" using just one operation. It requires a minimum of two replacement operations.

In option D, the third word "reted" is changed to "seted" using a replacement operation, and "seted" is then changed to "seteg" using another replacement operation. Since each word has to be formed by a different operation than that used for the preceding word, this option is also eliminated.

In option E, the first four words all start with the letter „f". Since we are given that at most 3 of the 6 words can begin with the same letter, therefore option E is eliminated.

We can see that only the sentence from option B is from the Word Game.

From the first word "Crobek", „b" is replaced by „e".

From the second word "Croeek", „c" is removed.

From the third word "roeek", „r" is replaced by „s".

In the fourth word "soeek", „x" is added.

From the fifth word "sxoeek", „s" is removed.

Hence, option B.

58. The last letter of the English alphabet that the first word of a sentence in the word game can begin with is

(A) t

(B) w

(C) x

(D) y

(E) z

Solution:

In a word game, 6 words are to be written from left to right on a single line alphabetical order.

Also we are given that at most 3 of the 6 words can begin with the same letter.

So if we start with letter „z", we can write only 3 words with the letter „z". Then we cannot write the next alphabetical letter. So we cannot start with the letter „z".

Then if we start with letter „y", we can write only 3 words with the letter „y". Then we can write the next 2 words with the letter „z". Then we cannot write the next alphabetical letter for the last word. So we cannot start with the letter „y".

So we can start with the letter „x".

Hence, option C.

59. If the first word in a sentence is "illicit" and the fourth word is "licit", then the third word can be

(A) Implicit
(B) Explicit
(C) Enlist
(D) Inlist
(E) Elicit

Solution:

Here the first word contains 7 letters i.e. "illicit".

Now here the fourth word is "licit".

Then the third word cannot be "Implicit" because we have to remove three letters "imp" from "Implicit" to get the word "licit" which is not possible as per the game theory.

Also the third word cannot be "Explicit" because we have to remove three letters "exp" from "Explicit" to get the word "licit" which is not possible as per the game theory.

Also the third word cannot be "Enlist" because we have to remove three letters "ens" from "Enlist" and add two letters "ci" to get the word "licit" which is not possible as per the game theory.

Also the third word cannot be "Inlist" because we have to remove three letters "ins" from "Inlist" and add two letters "ci" to get the word "licit" which is not possible as per the game theory.

But the third word can be "Elicit" because the letter „E" can be removed from the word to get word "licit" which is required.

Hence, option E.

60. If "clean" is the first word in a sentence and "learn" is another word in the sentence, then which one of the following is a complete and accurate list of the positions "learn" could occupy?

(A) Third
(B) Second, third, fourth
(C) Third, fourth
(D) Third, fourth, fifth
(E) Third, fourth, fifth, sixth

Solution:

Here "clean" is the first word.

We have to remove the letter „c" from the first word to get "lean" as the second word.

Then in this second word "lean", we can add the letter „r" to get "learn" as a third word.

i.e. clean   lean   learn   [operations: delete, add]

Similarly we can get the word "learn" as fourth, fifth and sixth positions as well:

Fourth position:

clean   clear   lear   learn   [operations: replace, delete, add]

Fifth position:

clean   dlean   lean   lear   learn   [operations: replace, delete, replace, add]

Sixth position:

clean   dlean   dleapn   eleapn   leapn   learn [operations: replace, add, replace, delete, replace]

Hence, option E.

61. If the first word in a sentence consists of five letters, then the maximum number of letters that the fifth word in the sentence could contain i**s**

(A) Four
(B) Five
(C) Six
(D) Seven
(E) Eight

Solution:

Here the first word contains 5 letters.

Now for the maximum number of letters in the fifth word, we can apply only 2 operations i.e. add the letter and then replace the letter. Then again add the letter and then replace the letter and so on.

In this way, the second word can contain 6 letters. Also, the third word also contains 6 letters.

Now, fourth word contains 7 letters and thus fifth word can contain only 7 letters.

Hence, option D.

Question No 62-65: Professor Mukhopadhay works only on Mondays, Tuesdays, Wednesdays, Fridays, and Saturdays. She performs four different activities – Lecturing, Conducting quizzes, evaluating quizzes and working on consultancy projects. Each working day she performs exactly one activity in the morning and exactly one activity in the afternoon. During each week her work schedule MUST satisfy the following restrictions:

She conducts quizzes on exactly three mornings.

If she conducts quizzes on Monday, she does not conduct a quiz on Tuesday.

She lectures in the afternoon on exactly two consecutive calendar days.

She evaluates quizzes on exactly one morning and three afternoons.

She works on consultancy project on exactly one morning.

On Saturday, she neither lectures nor conducts quizzes.

62. On Wednesdays, the professor could be scheduled to?

(A) Work on a consultancy project in the morning and conduct a quiz in the afternoon

(B) Lecture in the morning and evaluate quizzes in the afternoon.

(C) Conduct a quiz in the morning and lecture in the afternoon

(D) Conduct a quiz in the morning and work on consultancy project in the afternoon.

(E) Evaluate quizzes in the morning and evaluate quizzes in the afternoon.

Solution:

The professor conducts quiz on 3 mornings. We are given that she does conduct any quizzes on Saturdays.

Now, if she were to conduct a quiz on Mondays, then she cannot conduct a quiz on Tuesdays; thus the remaining 2 days on which she could conduct the quiz would be Wednesdays and Fridays.

On the other hand, if she did not conduct quiz on Mondays, then the 3 mornings on which she can conduct the quiz would be Tuesdays, Wednesdays and Fridays.

Thus, in either case, she conducts quiz on Wednesday mornings. Hence, options A, B and E can be eliminated.

Also, it is given that the professor works on consultancy project on exactly one *morning*. Thus, option D can also be eliminated.

Hence, option C.

63. Which of the following statements must be true?

(A) There is one day on which she evaluates quizzes both in the morning and in the afternoon.

(B) She works on the consultancy project on one of the days on which lectures.

(C) She works on consultancy project on one of the days on which she evaluates quizzes.

(D) She lectures on one of the days on which evaluates quizzes.

(E) She lectures on one of the days on which she conducts quiz.

Solution:

From the last restriction, we know that the professor does not lecture or conducts quiz on Saturdays.

We also know that she lectures on afternoons of two consecutive calendar days and she conducts quiz on exactly 3 mornings; and also, if she conducts quiz on Mondays she does not conduct quiz on Tuesday.

She can conduct quiz on Monday morning, Wednesday morning and Friday morning or Tuesday morning, Wednesday morning and Friday morning.

Also she cannot lecture on Friday, as she has to lecture on two consecutive calendar days and she does not lecture on Saturday.

She can lecture on Monday and Tuesday or Tuesday and Wednesday.

As it can be seen from the derived cases, there has to be at least one day on which she lectures and she conducts quiz.

Hence, option E.

64. If the Professor conducts a quiz on Tuesday, then her schedule for evaluating quizzes could be?

(A) Monday morning, Monday afternoon, Friday morning, Friday afternoon

(B) Monday morning, Friday afternoon, Saturday morning, Saturday afternoon

(C) Monday afternoon, Wednesday morning, Wednesday afternoon, Saturday afternoon

(D) Wednesday morning, Wednesday afternoon, Friday afternoon, Saturday afternoon

(E) Wednesday afternoon, Friday afternoon, Saturday morning, Saturday afternoon

Solution:

According to the Schedule given in option A and option B, the Professor evaluates quiz on 2 mornings but according to the given restrictions she evaluates quiz only on one morning.

Option A and option B are not correct.

According to option C and option D, the Professor evaluates quizzes on Wednesday mornings. However, according to given restrictions, the Professor has to conduct quiz on exactly 3 mornings and she cannot conduct a quiz on Saturdays.

She has to conduct quizzes on Monday mornings, Tuesday mornings and Friday mornings; but if she conducts quiz on Mondays, then she cannot a conduct quiz on Tuesdays.

Option C and option D are not correct.

Option E satisfies all the restrictions.

Hence, option E.

65. Which one of the following must be a day on which professor lectures?

(A) Monday

(B) Tuesday

(C) Wednesday

(D) Friday

(E) Saturday

Solution:

We have already deduced in question 63 that the Professor can take lectures on Mondays and Tuesdays or Tuesdays and Wednesdays.

She must take lecture on Tuesdays.

Hence, option B.

Read the following situation and choose the best possible alternative.

Question No. 66: The surnames of four professionals are: Bannerji, Chatterji, Mukherji and Pestonji. Their professions are accountant, lawyer, dentist and doctor (not necessarily in this order). The accountant and lawyer work in their offices, while the dentist and doctor work in their nursing homes. The accountant looks after Mukherji"s and Chatterji"s account. Chatterji, does not know Bannerji, although his nursing home is in the same street as Bannerji"s office. Chatterji is not a doctor.

What are the occupations of the four people?

(A) Bannerji – Doctor, Chatterji – Dentist, Mukherji – Accountant and Pestonji – Lawyer

(B) Bannerji – Lawyer, Chatterji – Dentist, Mukherji – Accountant and Pestonji – Doctor

(C) Bannerji – Doctor, Chatterji –Accountant, Mukherji – Dentist and Pestonji – Lawyer

(D) Bannerji – Lawyer, Chatterji – Dentist, Mukherji – Doctor and Pestonji – Accountant

(E) Bannerji – Dentist, Chatterji – Lawyer, Mukherji – Doctor and Pestonji – Accountant

Solution:

The accountant looks after Mukherji"s and Chatterji"s account.

Chatterji and Mukherji cannot be the accountant.

Also Chatterji does not know Bannerji. If Bannerji was the accountant, he would manage Chatterji"s account and would hence know him.

Bannerji also cannot be the accountant.

Pestonji is the Accountant.

It is also mentioned that Bannerji owns an office and Chatterji owns a Nursing home.

Bannerji has to be the Lawyer.

Chatterji is not a doctor

Mukherji has to be the doctor and Chatterji is the Dentist.

Bannerji – Lawyer, Chatterji – Dentist, Mukherji – Doctor and Pestonji – Accountant is the correct combination.

Hence, option D.

Go through the situation and the accompanying table, and pick up the best alternative to answer Question nos. 67-69

Question No 67 to 68: There are five sets of digits - Set A, Set B, Set C, Set D and Set E as shown in given diagram. Set A contains one digit, Set B contains two digits, Set C contains three digits, Set D contains two digits and Set E contains one digit. Rearrange the digits, across the sets such that the number formed out of digits of Set C is multiple of the numbers formed from digits in the sets on either side. For example; in the given diagram, Set C is a multiple of digits in Set A and Set B but not of Set D and Set E.

SET A	SET B	SET C	SET D	SET E
7	28	196	34	5

67. What is the minimum number of rearrangements required to arrive at the solution? A rearrangement is defined as an exchange of positions between digits across two sets. For example: when 1 from set C is exchanged with 5 of set E, it is counted as one rearrangement.

(A) 2   (B) 5   (C) 8   (D) 3   (E) 7

Solution:

We have,

SET A	SET B	SET C	SET D	SET E
7	28	196	34	5

Now in the first rearrangement, 7 from set A is exchanged with 2 of set B to get the following:

SET A	SET B	SET C	SET D	SET E
2	78	196	34	5

Now in the second rearrangement, 4 from set D is exchanged with 5 of set E to get the following:

SET A	SET B	SET C	SET D	SET E
2	78	196	35	4

Now in the third rearrangement, 9 from set C is exchanged with 5 of set D to get the following:

SET A	SET B	SET C	SET D	SET E
2	78	156	39	4

Thus, a minimum of 3 rearrangements are required.

Hence, option D.

68. Which of the following pair of digits would occupy set A and E?

(A) 2 and 4   (B) 2 and 6   (C) 3 and 6   (D) 3 and 9   (E) 4 and 8

Solution:

From the previous solution we get that set A and set E contains 2 and 4.

Hence, option A.

Question No. 69: Magic Box

5	15	1	16
10	4	8	9
11	6	12	2
4	3	13	7

Cut the square given above into four pieces along the lines and rearrange in such a manner that sum of all rows, columns and diagonals is equal to 34. One of the pieces, comprising 1 and 8, is shown in the diagram given below.

1			
8			

How many numbers would be there in the largest piece?

(A) 5   (B) 10   (C) 6   (D) 9   (E) 8

Solution:

There was an error in the question (4 is repeated twice in the table, instead of one of them being 14). Hence, no answer is provided.

Question 70 – 72: Read the following situations and choose the best possible alternative.

70. A database software manufacturing company found out that a product it has launched recently had a few bugs. The product has already been bought by more than a million customers. The company realized that bugs could cost its customers significantly. However if it informs the customers about the bug, it feared losing credibility. What would be the most ethical option for the company?

(A) Apologize and fix up the bug for all customers even if it has to incur losses.

(B) Do not tell customers about bugs and remove only when customers face problems, even if it means losses for the customers.

(C) Keep silent and do nothing.

(D) Keep silent but introduce an improved product that is bug free at the earliest.

(E) Take the product off the market and apologize to customers.

Solution:

As the defect in the product could cause significant damage to the customers, the company should take immediate action to fix the problem as otherwise if the customers would suffer loss their faith in the company would be lost which would be harmful for the company.

And if the company takes the product off the market then also it will affect its reputation.

The most ethical option for the company will be to fix up the bug for all the customers and apologize for the inconvenience caused to the customers.

Hence, option A.

71. The city of Nagar has a population of 10 million, 2 millions amongst whom were rich, 3 million poor and 5 million belonged to the middle class. Saundarya Cosmetics manufactured and sold beauty product to rich class at a premium price. Its products were very popular with customers. Many people from the middle and poor segments of population aspired to buy these products but could not afford because of high prices. Of late, sales growth was stagnating in the rich segment. Which of the following is the best option for Saundarya Cosmetics to maximize long-term profits?

(A) Sell the same products at lower prices to middle and poor classes.

(B) Sell its products under different brand names to middle and poor classes.

(C) Sell similar products, of different quality standards with different brand names, to middle classes and poor classes.

(D) Continue to target rich only and hope that today"s middle class would be tomorrow"s rich class.

(E) Target middle class as it is the largest segment and forget about rich class.

Solution:

If Saundarya cosmetics will sell the same product at lower price it will be at a loss and if it sells it"s products under a different brand name, still the price of the cosmetics will be high and unaffordable for middle and poor segments of population.

If it continues to target the rich segment only, then in future it may face severe loss as it will be dependent on the rich class and its popularity in rich segments seems to be reducing and at the same time as rich segment is the prominent part of its customers it cannot forget about rich segment and focus only on the middle class.

The best option for Saundarya cosmetics will be to sell similar products, of different quality standards with different brand names, to the middle and poor classes.

Hence, option C.

72. Seema was a finance manager in an MNC and felt that gender discrimination at work place hampered her career growth. Frustrated, she quit the job and started a company. While starting her company, Seema decided that she would have equal proportion of males and females. Over the last six years, Seema

emerged as a very successful entrepreneur and expanded her business to eight locations in the country. However, Seema recently started facing an ethical dilemma because she realized that female employees were not willing to travel across cities and work late hours, as the work required them to do so. Male employees did not hesitate undertaking such work. Seema started to feel the pressure of reducing the proportion of female employees. On the other hand, she is aware that equal representation was one of the strongest reasons for her to have founded the company. What should she do as a conscientious female entrepreneur?

(A) See if unwilling female employees could be given assignments which do not require travel and involve less overtime.

(B) Reduce the number of female employees as it is a business requirement. She should not let anything affect her business.

(C) Let the status quo continue.

(D) Henceforth hire only male employees.

(E) She should close the business.

Solution:

Seema cannot reduce the number of female employees as it was the strongest reason for her to start a new company and she cannot let the current situation to continue as female employees of the company are not willing to continue in such situation.

If she hires only male employees it will eventually lead to gender decimation, and will not help to solve the problem for the current employees.

Seema should see if unwilling female employees could be given assignments which do not require travel and involve less overtime.

Hence, option A.

73. You, a recruitment manager, are interviewing Mayank, a hard-working young man, who has problem in speaking fluent English. He has studied in vernacular medium school and colleges. Amongst the following options, what would you choose to do, if your company has vacancies?

(A) I would hire him at all costs.

(B) I would hire him for production or finance job but not for marketing job, which requires good communication skills.

(C) I would ask him to improve his communication skills and come back again.

(D) I would not hire him as he might be a burden on organization because of his poor communication skills.

(E) I would hire him for the job he is good at, and provide training in other areas.

Solution:

I could not hire him without providing any training as communication is a very essential skill that is required to work efficiently. People from Production and Finance department should also have good enough communication skills since one has to communicate within the company as well.

If he is told to improve his communication and come back again, he might not come back and the company may lose a hard working employee.

The best option will be to hire him and provide him training in the required areas.

Hence, option E.

Go through the table that follows and pick up the best alternative to answer questions.

Question No. 74 to 76: Teams A, B, C and D are participating in a cricket tournament. Team A has to pick up five batsmen out of ten available. All batsmen have played 100 matches each in the past. Past data indicates that C beats A 8 out of 10 times. B beats A 5 out of 10 times and D beats A 1 out of 10 times. The conditions for the series are likely to be normal and bowling strength of all teams is same. Manager of Team A, based on his past experience feels that team should take high risk against stronger opponents and low risk against weaker opponents for maximising chances of winning the game.

The average score of the top 10 batsmen of Team A is provided in the table given below

Name of the batsmen	Average of batsmen based on past performance	Number of times dismissed below 20	Number of times dismissed around average	Number of times scores more than a century
RD	40	20	70	3
ST	44	20	60	10
SG	41	25	50	10
VS	31	50	20	15
RU	28	55	25	12
YS	35	40	40	10
VV	35	35	50	5
MK	30	30	45	5
MT	36	45	30	10
MD	45	30	50	10

The average scores of the top 5 batsmen for each team playing in the tournament are: C(270); B(215); D(180) and A(215).

74. Team A would play the third match with B. Based on the statistics above, whom should the manager choose so that A has maximum chances of winning?

(A) RD, RU, MK, VS, YS

(B) RD, VS, MT, RU, YS

(C) ST, RD, MK, MD, SG

(D) RD, VV, SG, VS, MD

(E) SG, RU, YS, MK, VV

Solution:

Data given is ambiguous. Hence, no solution is provided.

75. Team A is playing its first match with team C. Based on the statistics above, whom should the manager choose so that the team has maximum chances of winning?

(A) RD, ST, SG, MD, YS

(B) VS, YS, RU, MD, MT

(C) RD, ST, SG, VS, MD

(D) YS, RU, VS, MK, MD

(E) ST, VS, RU, MD, SG

Solution:

Data given is ambiguous. Hence, no solution is provided.

76. Team A would play the second match with D. Based on the statistics above, whom should the manager choose so that A has maximum chances of winning?

(A) RD, RU, MK, VS, YS

(B) ST, RD, VV, SG, MD

(C) RD, ST, SG, VS, MD

(D) SG, RU, YS, MK, MD

(E) ST, RD, MK, MD, SG

Solution:

Data given is ambiguous. Hence, no solution is provided.

Read the following caselet and choose the best alternative (Question 77-82):

Mr. Rajiv Singhal, Chairman of the Board of Directors of Loha India Ltd., (a steel manufacturing company) had just been visited by several other directors of the company. The directors were upset with recent actions of the company president, Mr. Ganesh Thakur. They demanded that the board consider firing the president.

Mr. Thakur, recently appointed as president, had undertaken to solve some of the management-employees problems by dealing directly with the individuals, as often as possible. The company did not have a history of strikes or any other form of collective action and was considered to have good work culture. However, Mr. Thakur felt that by dealing directly with individuals, he could portray the management"s concern for the employees. An important initiative of Mr. Thakur was to negotiate wages of the supervisors with each supervisor. In these negotiation meetings he would not involve anyone else, including the Personnel Department which reported to him, so as to take unbiased decision. After negotiation, a wage contract would be drawn up for each supervisor. This, he felt, would recognize and reward the better performers. Mr. Thakur successfully implemented the process for most of the supervisors, except those working in night shift. For them he had drawn up the contracts unilaterally benchmarking the wages of supervisors of night shift with that of supervisors of the day shift.

For several days Ram Lal a night shift supervisor, had been trying to seek an appointment with Mr. Thakur about his wages. He was disgruntled, not only over his failure to see the president, but also over the lack of discussions about his wage contract prior to its being effected. As a family man with six dependents, he felt his weekly wage should be higher than that granted to him.

Last Thursday afternoon Ram Lal stopped by the president"s office and tried to see him. Mr. Thakur"s secretary refused his request on the grounds that Mr. Thakur was busy. Infuriated, Ram Lal stormed into the president"s office and confronted the startled Mr. Thakur, with his demands for a better wage. Mr. Thakur stood up and told Ram Lal to get out of his office and express his grievance through official channel. Ram Lal took a swing at the president who in turn punched Ram Lal on the jaw and knocked him unconscious.

77. The most likely premise behind Mr. Thakur"s initiative regarding individualised meetings with the supervisors seems to be

(A) Involvement of company"s president in wage problems of employees will lead to a better goodwill towards the management among the workers.

(B) Employee related policies should allow scope for bargaining by employees which leads to unsatisfied employees.

(C) Individual agreements with supervisors would allow the management to prevent any possible collective action by the supervisors.

(D) Management will be able to force supervisors to accept lesser wages individually in this way.

(E) He would be able to know who the trouble makers in the plant are by interacting with the supervisors.

Solution:

The most likely premise behind Mr. Thakur"s initiative regarding individualised meetings with the supervisors seems to be that the involvement of company"s president in wage problems of employees will lead to a better goodwill towards the management among the workers.

This is clear as it is mentioned in the caselet that Mr. Thakur felt that by dealing directly with individuals, he could portray the management"s concern for the employees.

Hence, option A.

78. Out of the following, which one seems to be the most likely cause of Ram Lal"s grievance?

(A) His disappointment with the management"s philosophy of having one to one interaction as the supervisors were in a way being forced to accept the wage contracts.

(B) His being in the night shift had worked to his disadvantage as he could not interact with the management regarding his problem.

(C) He was not allowed to meet chairman of the board of directors of the company.

(D) Employment in the night shift forced him to stay away from his family during the day time and therefore he could not interact with his family members much.

(E) All of these.

Solution:

From the given options, the most likely cause of Ram Lal"s grievance seems to be that his being in the night shift had worked to his disadvantage as he could not interact with the management regarding his problem.

This can be inferred since it is mentioned that he was trying to meet the president but was not allowed to on grounds that the president was busy.

Hence, option B.

79. The most important causal factor for this entire episode could be:

(A) Trying to follow a divide-and-rule policy in his dealings with the supervisors.

(B) Paternalistic approach towards mature individuals in the organisation.

(C) Legalistic approach to employee problems.

(D) Inconsistent dealings of Mr. Thakur with supervisors.

(E) Inadequate standards for measurement of supervisors" on-job performance.

Solution:

The most important causal factor for this entire episode could be the inconsistent dealings of Mr. Thakur with supervisors as it is mentioned that he was not able to successfully implement the process for the supervisors working in the night shift.

Hence, option D.

80. The situation with Mr. Lal could have been avoided if Mr. Thakur had

1. Delegated the task of negotiation of wage contracts for night shift employees to Personnel department.

2. Created a process for supervisors working in the night shift so that they could have an opportunity to interact with him.

3. Created an open door policy that would have allowed employees to see him without any appointment.

4. Postponed the decision of wage revision for supervisors in the night shift for two months, since supervisors were rotated on different shifts after every two months.

The option that best arranges the above managerial interventions in decreasing order of organisational impact is:

(A) 4, 2, 3, 1

(B) 4, 3, 2, 1

(C) 4, 3, 1, 2

(D) 4, 1, 2, 3

(E) 2, 3, 1, 4

Solution:

From the given statements, the statement that best suits would be to create a process for supervisors working in the night shift so that they could have an opportunity to interact with Mr. Lal.

Since supervisors being rotated on different shifts after every two months is not mentioned in the caselet, and also to postpone the decision for supervisors in the night shift for two months is not right, Fourth statement can"t be the best possible solution.

Hence, option E.

81. Apart from the supervisors working the night shift, executives of which department will have the most justified reasons to be disgruntled with Mr. Thakur"s initiative?

1. Production department – for not being consulted regarding the behaviour of the supervisors on the shop floor.

2. Finance department – for not taken into confidence regarding the financial consequences of the wage contracts.

3. Marketing department – for not being consulted on the likely impact of the wage contracts on the image of the company.

4. Quality control – for not being able to give inputs to Mr. Thakur on how to improve quality of steel making process.

5. Personnel department – for it was their work to oversee wage policies for employees and they had been ignored by Mr. Thakur.

(A) 1 + 2 + 3

(B) 1 + 4 + 5

(C) 1 + 3 + 4

(D) 1 + 2 + 5

(E) 3 + 4 + 5

Solution:

Firstly the Personnel department will have the most justified reason to be disgruntled with Mr. Thakur"s initiative as it was their work to oversee wage policies for employees and they had been ignored by Mr. Thakur.

The finance department also has a justified reason to be disgruntled for not being taken into confidence regarding the financial consequences of the wage contracts.

And also the production department, as they should have been consulted to find out if there is any difference in the performance of the supervisors in the day shift and the supervisors in the night shift before implementing different wage policies for the two.

Hence, option D.

82. Which of the following managerial attributes does Mr. Thakur seem to lack the most?

(A) Emotional instability under pressure

(B) Proactive problem solving

(C) Ethical behaviour

(D) Independent decision making

(E) Emotional stability under pressure

Solution:

When Mr. Ram Lal walked into Mr. Thakur"s office without an appointment in order to narrate his grievances, instead of listening to him and attempting to find a solution, Mr. Thakur asked him to get out

of his office and then punched him! This behaviour suggests that Mr. Thakur lacks emotional stability under pressure the most.

Hence, option E.

SECTION C: VERBAL AND LOGICAL ABILITY

Directions (83-85): Carefully read the statements in the questions below and arrange them in a logical order.

83:
1. So too it is impossible for there to be any propositions of ethics. Propositions can express nothing that is higher.
2. The sense of the world must lie outside the world. In the world everything is as it is, and everything happens as it does happen: in it no value exists - and if it did exist it would have no value. If there is any value that does have value, it must lie outside the whole sphere of what happens and is the case. For all that happens and is the case is accidental. What makes it non-accidental cannot lie within the world, since if it did it would itself be accidental. It must lie outside the world.
3. It is clear that ethics cannot be put into words. Ethics is transcendental.
4. All propositions are of equal value.

(A) 4-2-1-3

(B) 2-1-3-4

(C) 1-3-4-2

(D) 4-3-1-2

(E) 3-1-2-4

Solution:

It is clear that statement 4 may be the first statement as compared to statement 3 since statement 3 has a concluding essence to it by mentioning, "ethics cannot be put into words. Ethics is transcendental." This would indicate that the paragraph is on "ethics" and statement 3 is effectively a summary of what is mentioned in the paragraph.

Statement 2 continues after statement 4. The idea in the second statement does not match up with any of the other three statements directly. However, the idea of „value" is continued from statement 4 to statement 2. Hence, that is a pair.

Statements 2-1 are also a pair since statement 1 begins with "So too..." continuing from the subject under discussion in statement 2.

We have already established statement 3 as the concluding statement.

Hence, the correct answer is option A.

84:
1. The fact all contribute only to setting the problem, not to its solution.
2. How things are in the world is a matter of complete indifference for what is higher. God does not reveal himself in the world.
3. To view the world sub *specie aeterni* is to view it as a whole- a limited whole. Feeling the world as a limited whole- it is this that is mystical.

4. It is not how things are in the world that is mystical, but that it exists.

(A) 1-2-3-4

(B) 2-1-3-4

(C) 2-1-4-3

(D) 3-1-4-2

(E) 3-4-1-2

Solution:

An easy question if you managed to locate the mandatory pair.

The talk about „what is mystical" has been carried out in statements 3 and 4. Statement 4 stresses on "it is NOT how things are in the world that is mystical..." and statement 3 continues with "... it is this that is mystical." An answer to what is not but what is.

Thus, statement 3 follows statement 4 (4-3). This pair is there in only option C. For confirmation, we can check the sequence of 2-1-4. The higher thing is indifferent to things in the world in statement 2– they contribute to setting the problem in statement 1– how things are not mystical in statements 4 and 3.

The sequence makes sense and maintains a logical flow.

Hence, the correct answer is option C.

85:
1. The operation is what has to be done to one proposition in order to make other out of it.
2. Structure of proposition stands in internal relations to one another.
3. In order to give prominence to these internal relations we can adopt the following mode of expression: we can represent a proposition as the result of an operation that produces it out of other propositions (which are bases of the operation).
4. An operation is the expression of a relation between the structures of its result and of its bases.

(A) 1-2-3-4

(B) 2-3-4-1

(C) 4-3-1-2

(D) 2-1-3-4

(E) 4-1-2-3

Solution:

The keywords "these internal relations" in statement 3 refers to "internal relations" mentioned in statement 2. Therefore, 3 follows 2 (2-3). With that we can eliminate options B and D.

Statement 4 introduces the idea of „operations" (an operation), which is followed up with further discussions on the same in statements 3 and 1. Only one option starts with statement 4 among options A, C and E, and that is option C.

Hence, the correct answer is option C.

Analyse the passage given and provide an appropriate answer for the question nos. 86 through 91 that follow.

Every conscious mental state has a qualitative character that we refer to as mood. We are always in a mood that is pleasurable or unpleasurable to some degree. It may be that bad moods relate to their being too positive reinforcement in a person"s current life and too many punishments. In any case, moods are distinguished from emotions proper by not being tied to any specific object. But, this distinction is not watertight, in that emotions need not be directed at objects that are completely specific (we can be angry just at people generally) while there is always a sense of a mood having a general objective like the state of the world at large. Moods manifest themselves in positive or negative feelings that are tied to health, personality, or perceived quality of life. Moods can also relate to emotions proper, as in the aftermath of an emotional incident such as the failure to secure a loan. A mood on this basis is the mind"s judgment on the recent past. For Goldie, emotion can bubble up and down within a mood, while an emotion can involve characteristics that are non-object specific.

What is important for marketing is that moods colour outlook and bias judgements. Hence the importance of consumer confidence surveys, as consumer confidence typically reflects national mood. There is mood - congruence when thoughts and actions fall inline with mood. As Goleman says, there is a "constant stream of feeling" that runs "in perfect to our steam of thought". Mood congruence occurs because a positive mood evokes pleasant associations that lighten subsequent appraisals (thoughts) and actions, while a negative arouses pessimistic associations that influence future judgment and behaviour. When consumers are in a good mood, they are more optimistic about buying more confident in buying, and much more willing to tolerate things like waiting in line. On the other hand, being in a mood makes buying behaviour in the "right mood" by the use of music and friendly staff or, say, opens bakeries in shopping malls that delight the passer-by with the smell of fresh bread.

Thayer views moods as a mixture of biological and psychological influences and, as such, a sort of clinical thermometer, reflecting all the internal and external events that influence us. For Thayer, the key components of mood are energy and tension in different combinations. A specific mixture of energy and tension, together with the thoughts they influence, produces moods. He discusses four mood states:

• Calm-energy: he regards this as the optimal mood of feeling good

• Calm-tiredness: he regards this as feeling a little tired without any stress, which can be pleasant.

• Tense-energy: involves a low level of anxiety suited to a fight-or-flight disposition.

• Tense-tiredness: is a mixture of fatigue and anxiety, which underlies the unpleasant feeling of depression.

People generally can "feel down" or "feel good" as a result of happenings in the world around them. This represents the national mood. People feel elated when the national soccer team wins an international match or depressed when their team has lost. An elated mood of calm - energy is an optimistic mood, which is good for business. Consumers, as socially involved individuals, are deeply influenced by the prevailing social climate. Marketers recognize the phenomenon and talk about the national mood being, say for or against conspicuous consumption. Moods do change, though. Writing early in the nineteenth century, Toqueville describes an American elite embarrassed by the ostentation of material display; in the

"Gilded Age", sixty years later, many were only too eager to embrace a materialistic vulgarity. The problem lies in anticipating changes in national mood, since a change in mood affects everything from buying of equities to the buying of houses and washing machines. Thayer would argue that we should be interested in national events that are likely to produce a move toward a tense- tiredness state or toward a calm-energy state, since these are the polar extremes and are more likely to influence behaviour. Artists sensitive to national moods express the long-term changes. An example is the long- term emotional journey from Charles Dickens"s depiction of the death of little Nell to Oscar Wilde"s cruel flippancy about it. "One would have to have a heart of stone not to laugh at the death of little Nell", which reflects the mood change from high Victorian sentimentality to the acerbic cynicism of the end of the century, as shown in writers like Thomas Hardy and artists like Aubrey Beardsley.

Whenever the mind is not fully absorbed, consciousness is no longer focused and ordered. Under such conditions the mind falls into dwelling on the unpleasant, with a negative mood developing. Csikszentmihalyi argues that humans need to keep consciousness fully active is what influences a good deal of consumer behaviour. Sometimes it does not matter what we are shopping for - the point is to shop for anything, regardless, as consuming is one way to respond to the void in consciousness when there is nothing else to do.

86: Which one of the following statements best summarizes the above passage?

(A) The passage highlights how moods affect nations.

(B) The passage highlights the importance of moods and emotions in marketing.

(C) The passage draws distinction between moods and emotions.

(D) Some writers influenced national moods through their writings.

(E) Thayer categorised moods into four states.

Solution:

The passage is about moods and how moods influence consumer behaviour.

Option A cites „nations" but this has not been discussed in the passage.

The distinction between moods and emotions has been discussed only at the beginning of the passage. Hence, option C doesn"t best describe the passage.

The discussion has been limited to a few authors and that too only towards the end of the passage. Hence, option D doesn"t best describe the passage.

The categorization of moods in option E is a specific part of the passage; therefore it is not a comprehensive summary.

Option B best summarizes the passage; a lot of the passage deals with how moods and emotions may influence marketing and consumer behavioural patterns.

Hence, the correct answer is option B.

87: Which of the following is the closest to "conspicuous consumption" in the passage?

(A) Audible consumption

(B) Consumption driven by moods and emotions

(C) Socially responsible consumption

(D) Consumption of material items for impressing others

(E) Private but not public consumption

Solution:

„Conspicuous" is obvious. Option A and E go out of scope, as audible or public/private consumption has not been dealt with in this regard.

The idea of Conspicuous consumption is more in lines of it being *evident* than it being consumption driven by moods and emotions, as mentioned in option B.

Consumers are driven by the prevailing social climate. That may make option C attractive. But, socially responsible consumption is not the same as consumption strongly influenced by social atmosphere.

In fact, option D gives a perfect example of „conspicuous consumption" since the term, „conspicuous consumption" means to spend lavishly on goods and services in order to display one"s wealth which fits in perfectly with option D.

Hence, the correct answer is option D.

88: What is "moods congruence"?

(A) When moods and emotions are synchronized.

(B) When moods are synchronous with thoughts and actions.

(C) When emotions are synchronous with actions and thoughts.

(D) When moods are synchronous with thoughts but not with action.

(E) When moods are synchronous with action but not with thought.

Solution:

„Moods congruence" is defined in the second paragraph of the passage as, "when thoughts and actions fall in line with moods".

So both thought and actions are important which eliminates options D and E.

The passage does not include emotions in "mood congruence" which eliminates options A and C.

Hence, the correct answer is option B which fits the criteria required.

89: Implication and Proposition are defined as follows:

Implication: a statement which follows from the given text.

Proposition: a statement which forms a part of the given text.

Consider the two statements below and decide whether they are implications or propositions.

   I.   The marketers should understand and make use of moods and emotions in designing and selling products and services.

   II.   Consuming is nothing but way of filling the void in consciousness.

(A) Both statements are implications.

(B) First is implication, second is proposition.

(C) Both are propositions.

(D) First is proposition, second is implication.

(E) Both are neither implication nor proposition.

Solution:

From the last statement of the passage, statement II can be seen as a proposition as it is taken directly from the passage. That helps us to eliminate options A, D and E.

The discussion of moods influencing consumer decisions begins from paragraph 2 of the passage. The author intends that the marketers should understand and make use of moods and emotions while designing and selling their products. At the same time this is not explicitly mentioned in the text. Thus, the statement is an implication.

Hence, the correct answer is option B.

90:   Which statements from the ones given below are correct?

1. In general, emotions are object specific

2. In general, moods are not object specific

3. Moods and emotions are same

4. As per Thayer, moods are a mix of biological and psychological influences

(A) 1, 2, 3

(B) 2, 3, 4

(C) 2, 4, 3

(D) 1, 2, 4

(E) All four are right

Solution:

Paragraph 3 cites what Thayer said about moods being a mixture of psychological and biological influences. Therefore, statement 4 is correct.

Statements 1 and 2 have been mentioned in the introductory paragraph. In the same paragraph, the author highlights the subtle differences between moods and emotions. Again, if we take statements 1 and 2 as correct, they portray one difference between the two which makes statement 3 incorrect.

Hence, the correct answer is option D.

91: The statement "Moods provide energy for human actions" is _____.

(A) always right.

(B) always wrong.

(C) sometimes right.

(D) not derived from the passage.

(E) contradictory.

Solution:

According to the passage, "a specific mixture of energy and tension along with the thoughts they influence, produces moods".

The key components of moods are "energy" and "tension". Among several other instances, the author states that "An elated mood of calm – energy is an optimistic mood, which is good for business." So, though not stated outright, moods do provide "energy" for human actions.

From this, options B, D and E can be eliminated.

However, "a tense-tiredness state" of mood may not produce energy for human action. Hence, „sometimes" is more appropriate than „always".

Hence, the correct answer is option C.

Directions (92-99): Go through the caselets below and answer the questions that follow.

Question No (92-93): According to recent reports, CEOs of large organisations are paid more than CEOs of small organisations. It does not seem fair that just because a CEO is heading a big organisation s/he should be paid more. CEOs" salary should be related to performance, especially growth in terms of sales and profits. Of course, big organisations are more complex than the small, but all CEOs require significant amount of energy and time in managing organisations. There is no proof that CEOs of big organisations are more stressed than CEOs of small organisations. All CEOs should be paid according to their performance.

92: A person seeking to refute the argument might argue that

(A) CEOs should be paid equally.

(B) Managing big organisation is more challenging than small.

(C) CEOs, who travel more should be paid more.

(D) If CEOs of small companies perform well, the company would become big and so would be CEOs" salary.

(E) Highly qualified CEOs should be paid more because they have acquired difficult education.

Solution:

Option A supports the argument and is eliminated.

Options C and E give weak reasons- travel and education- for CEOs to be paid more. Further, these reasons have not been mentioned in the passage and therefore they cannot be supported or refuted.

Option D also supports the view that only if a small organization becomes big, which will happen should their CEO performs, they - the CEO and the organization - will grow and hence will have a hike in their salaries. That means that it supports the view that CEOs of big organizations are paid more and does not explain why it is justified.

Only option B gives a reason, i.e. "more challenging"- to refute the argument that all CEOs should be paid equally.

Hence, the correct answer is option B.

93: Which of the following, if true, would strengthen the speaker"s argument?
(A) CEOs of small organisations come from good educational background.
(B) CEOs of big organisations are very difficult to hire.
(C) A few big family businesses have CEOs from within the family.
(D) Big organisations contribute more towards moral development of society.
(E) CEOs in big organisation take much longer to reach top, as compared to their counterparts in small
    organisations.

Solution:

The speaker wants CEO salaries based on performance rather than on the size of the organization. CEOs should be judged on their performance since similar amounts of efforts are required whether an organization is small or big.

Options C, D and E go against the speaker"s arguments.

Big family CEOs may command higher salaries by virtue of being owners in option C.

If big organizations contribute to the moral fabric, the argument provides little justification as to why their CEOs should command higher pay packages as mentioned in option D.

If, as mentioned in option E, CEOs of big organizations take longer to reach to the top, more years of experience are added and hence, a higher salary may be justifiable. However, this does not strengthen the author"s argument which is performance based compensation for CEOs.

Between options A and B, B is a stronger argument. CEOs of bigger organizations are difficult to hire, because very few meet the required eligibility norms and the expectations are higher.

Option A does not strengthen the author"s argument because the same- "good educational background" can be applied to CEOs of large organizations as well. Further, the passage is silent as to educational qualifications being the sole factor in deciding CEOs compensation.

Hence, the correct answer is option B.

Question No (94-95): Hindi ought to be the official language of India. There is no reason for the government to spend money printing documents in different languages, just to cater to people who cannot read/write Hindi. The government has better ways to spend tax payers" money. People across India should read/write Hindi or learn it at the earliest.

94: Which of the following, if true, would weaken the speaker"s argument the most?

(A) The government currently translates official documents into more than eighteen languages.

(B) Hindi is the most difficult language in the world to speak.

(C) Most people who travel across India learn Hindi within five years.

(D) Making Hindi the official language is a politically unpopular idea.

(E) People who are multilingual usually pay maximum taxes.

Solution:

The author is of the opinion that people should learn Hindi as the government wastes tax payers" money by printing the same documents in different languages.

Option A is simply a statement and does nothing to weaken the speaker"s argument.

As mentioned in option B, If Hindi is the „most difficult language", it still does not answer the question adequately as to why people should not learn Hindi.

Even if it takes take five years to learn Hindi, it does not weaken the statement that people should learn Hindi as mentioned in option C.

Option D weakens the speaker"s arguments by stating that it is a politically unpopular idea.

Option E too weakens the stand by saying that most taxes are being paid by people who are multilingual. Of the two, statement E is a more appropriate option. One, it is not a biased or subjective opinion but is a fact. Two, the author"s main argument for making Hindi compulsory is to save tax payers money while printing documents. Since multilingual citizens pay maximum taxes they may be entitled to have forms printed in their own languages.

Hence, the correct answer is option E.

95: United Nations members contribute funds, proportionate to their population, for facilitating smooth functioning of the UN. By 2010, India, being the most populous nation on the planet, would contribute the maximum amount to the UN. Therefore, official language of United Nations should be changed to Hindi.

Which of the following is true?

(A) The point above contradicts the speaker"s argument.

(B) The point above extends the speaker"s argument.

(C) The point above is similar to speaker"s argument.

(D) The point above concludes speaker"s argument.

(E) The point above strengthens the speaker"s argument.

Solution:

That Hindi should be made the United Nation"s official language joins hands with the earlier speaker"s support for Hindi as an official language in government circles.

It is not a conclusion, since India"s actions in the UN on being the highest contributor in revenues will not end in the imposition of the Hindi language only. Therefore, we can eliminate option D.

It does not contradict the earlier paragraph. The earlier paragraph was strongly in support for imposition of Hindi in government circles. Hence, option A too can be eliminated.

The circumstances for the imposition of Hindi in the nation and Hindi in the UN are different and hence, options C and E both can be eliminated. It is being imposed in the UN because India would be the biggest financial contributor, while Hindi is seeking to be imposed in the country in order to stop wasting tax payer"s money by printing forms in different languages. The two reasons are not „similar". Therefore we can eliminate option C.

Option E can also be eliminated because the argument for imposition of Hindi by the speaker in all correspondences has already been made in the earlier passage. Therefore, arguing for Hindi to be used in the UN is in no way „strengthening" the first speaker"s argument but merely „extending" it.

Hence, the correct answer is option B.

Question No (96-97): The Bistupur-Sakchi corner needs a speed-breaker. Loyola school children cross this intersection, on their way to the school, and many a times do not check out for traffic. I get to read regular reports of cars and other vehicles hitting children. I know that speed-breakers are irritating for drivers, and I know that children cannot be protected from every danger, but this is one of the worst intersections in town. There needs to be a speed-breaker so that vehicles have to slow down and the children be made safer.

96: Which of the following arguments is used in the above passage?

(A) Analogy - comparing the intersection to something dangerous.

(B) Emotive - referring to the safety of children to get people interested.

(C) Statistical analysis - noting the number of children hit by vehicles.

(D) Personalization - telling the story of one child"s near accident at the intersection.

(E) Attack - pointing out people who are against speed-breakers as being uncaring about children.

Solution:

The argument is „emotive". In order to attract people"s attention it talks about the safety of school going children, which is an emotive issue with most people. But we can also arrive at this answer by eliminating other options.

The number of children has not been mentioned, therefore, it is not statistical as mentioned in option C.

No example or story of an injured child has been narrated in the paragraph; therefore, option D can also be eliminated.

Option E can be eliminated because the passage is clearly not to attack people for their disregard to children"s safety but to pin point areas in improving children"s safety.

The argument is not an analogy either as mentioned in option A. If the intersection was really „dangerous"
it would have been so for everyone, not just for school children.

Hence, the correct answer is option B.

97: According to a recent research conducted by the district road planning department, ten percent students come with parents in cars, twenty percent students use auto-rickshaws, twenty percent students use taxis, forty percent students use the school buses and ten percent students live in the hostel inside the school.

Which of the following is true about the above paragraph?

(A) It extends speaker"s argument using analogy.

(B) It extends the speaker"s argument using statistical data.

(C) It is similar to speaker"s argument.

(D) It concludes speaker"s argument by using personalization.

(E) It contradicts the speaker"s argument using statistical data.

Solution:

The numbers mentioned in the paragraph show that no kids walk down to school. Therefore they do not cross the intersection on foot. Most of them come to school with their parents by car or are ferried by buses, autos or taxis. Therefore, it contradicts the earlier statement by using data or statistics.

Thus, it neither extends the arguments as mentioned in options A or B, neither does it conclude the argument as mentioned in option D nor is it similar as mentioned in option C.

That makes statement E the only correct statement.

Hence, the correct answer is option E.

Question No (98-99): History, if viewed as a repository not merely of anecdotes or chronology, could produce a decisive transformation in the image of science by which we are now possessed. That image has previously been drawn, even by scientists themselves, mainly from the study of finished scientific achievements as these are recorded in the classics and, more recently, in the textbooks from which each new scientific generation learns to practice its trade.

98: Which of the following best summarizes the above paragraph?

(A) Scientific achievements are recorded in classics and text books.

(B) History of science can be inferred from finished scientific achievement

(C) Different ways of looking at history can produce altogether different knowledge.

(D) Text books may be biased.

(E) All of above.

Solution:

The author speaks about "decisive transformation in the image of science." He further iterates, "That **image** has been drawn mainly from the study of finished scientific achievements."

Options A and B do not mention how this "decisive transformation" in the image of science is to be achieved.

Option C conforms to the concept of producing a transformation in that "image", or, producing different perspectives on scientific knowledge by focusing on different angles of history. Therefore, statement C could be a likely answer.

However, on checking options D and E, that can be confirmed. „Textbooks may be biased" in option D is an opinion and cannot be a summary for this passage.

Since we have already eliminated three out of the four options, option E does not hold good.

Hence, the correct answer is option C.

99: Which of the following statements is the author most likely to agree with?

(A) History of science presents a scientific way of looking at scientific developments and thus contributes to progress in science.

(B) History of science should contain only the chronology of the scientific achievements.

(C) More number of scientific theories results in more number of publications, which benefits publishers.

(D) History of science should purposely present different images of science to people.

(E) History of science can present multiple interpretations to people regarding the process of scientific developments.

Solution:

Option A underlies scientific progress, which in a way may be implied from the passage, but the passage mentions more about looking at history from a new angle than on looking at it from a scientific angle, although that may help.

Option B is a limited concept. Also, it goes against what author believes in, „…not merely of anecdotes or chronology…"

Option C speaks about quantity of publications which has not been mentioned in the passage.

The author stresses on the „way it is viewed" rather than „purposely present". That cancels out option D as well.

It is only option E which speaks about „multiple interpretations" or multiple views. Hence, the correct answer is option E.

Directions (100-101): Go through the caselets below and answer the questions that follow.

100: Goodricke Group Ltd is planning to give top priority to core competence of production and marketing of tea in 2007. The company intends to increase the production of orthodox varieties of tea. Goodricke is planning to invest Rs. 10 crore to modernise the factories. The company has announced a net profit of Rs. 5.49 crore for 2006 as against Rs. 3.76 crore in 2005.

Which of the following can be deduced from the caselet?

(A) Production and marketing is core competence of Goodricke Group.

(B) Increase in production of existing products enhances core competence.

(C) Core competence can be used for furthering company"s interests.

(D) Core competence leads to modernization.

(E) Goodricke has given top priority to production because it has earned net profits of Rs. 5.49 crore.

Solution:

We are looking at deduction here. Option A is a restatement and though it is tempting to take it into consideration, it should be eliminated as the question is about inferring by applying logic.

Option B takes only production into account and therefore, is only partially correct.

The company has been making profits so far and thus, it may be deduced that planning for priority on core competence can further the company"s interests as mentioned in option C.

Option D cannot be deduced because the link between core competence and modernization has not been shown in the passage.

The passage gives no data to support or infer that top priority has been given to production due to higher profitability. Thus, option E is ruled out.

Hence, the correct answer is option C.

101: The author reflects on the concept of *Blue Ocean* Strategy. He explains that this concept delivers an instinctive framework for developing uncontested market space and making the competition irrelevant. The author remarks that *Blue Ocean* Strategy is about having the best mix of attributes that result in creation of uncontested market space and high growth, and not about being the best.

The above paragraph appears to be an attempt at

(A) defining Blue Ocean strategy.

(B) developing the framework for Blue Ocean strategy.

(C) reviewing an article or a book on Blue Ocean strategy.

(D) highlighting how Blue Ocean strategy leads to better returns.

(E) None of above.

Solution:

The paragraph mentions "author" and the author"s opinions about "Blue Ocean Strategy".

Therefore, the passage does not concern itself with the definition of "Blue Ocean Strategy" as mentioned in option A or in developing the framework for this strategy as mentioned in option B or in highlighting how the implementation of the strategy leads to better returns as mentioned in option D.

Rather, the passage is about what a certain author thinks about "Blue Ocean Strategy". It is most likely a review of a book or an article as mentioned in option C. Another hint is that the passage states "The author reflects on" which perhaps signifies that the author has just read something about the strategy and then goes on to give his opinion of it.

Hence, the correct answer is option C.

Analyse the passage given and provide an appropriate answer for the question nos. 102 through 104 that follow.

Deborah Mayo is a philosopher of science who has attempted to capture the implications of the new experimentalism in a philosophically rigorous way. Mayo focuses on the detailed way in which claims are validated by experiment, and is concerned with identifying just what claims are borne out and how. A key idea underlying her treatment is that a claim can only be said to be supported by experiment if the various ways in which the claim could be as fault have been investigated and eliminated. A claim can only be said to be borne out by experiment, and a severe test of a claim, as usefully construed by Mayo, must be such that the claim would be unlikely to pass it if it were false.

Her idea can be explained by some simple examples. Suppose Snell"s law of refraction of light is tested by some very rough experiments in which very large margins of error are attributed to the measurements of angles of incidence and refraction, and suppose that the results are shown to be compatible with the law within those margins of error. Has the law been supported by experiments that have severely tested it? From Mayo"s perspective the answer is "no" because, owing to the roughness of the measurements, the law of refraction would be quite likely to pass this test even if it were false and some other law differing not too much from Snell"s law true. An exercise I carried out in my school-teaching days serves to drive this point home. My students had conducted some not very careful experiments to test Snell"s law. I then presented them with some alternative laws of refraction that had been suggested in antiquity and mediaeval times, prior to the discovery of Snell"s law, and invited the students to test them with the measurements they had used to test Snell"s law; because of the wide margins of error they had attributed to their measurements, all of these alternative laws pass the test. This clearly brings out the point that the experiments in question did not constitute a severe test of Snell"s law. The law would have passed the test even if it were false and one of the historical alternatives true.

102: Which of the following conclusion can be drawn from the passage?

(A) Experimental data might support multiple theoretical explanations at the same time, hence validity of theories needs to be tested further.

(B) Precise measurement is a sufficient condition to ensure validity of conclusions resulting from an experiment.

(C) Precise measurement is both a necessary and sufficient condition to ensure validity of conclusions resulting from an experiment.

(D) Precise measurement along with experimenter‟s knowledge of the theory underpinning the experiment is sufficient to ensure the validity of conclusions drawn from experiments.

(E) All of these

Solution:

The passage attempts to explain that results of experiments done with rough measurements may incorrectly depict other theories not actually true. It may imply that precise measurements may then assist. But that remains an implication and not a conclusion. A conclusion has to be drawn from the passage.

Option C is incorrect because precise measurement although necessary is *not* sufficient in itself to ensure validity of conclusions resulting from an experiment.

Options B and D are also incorrect because precise measurement is *one* of the conditions to ensure validity of conclusions resulting from an experiment and knowledge of the relevant theory is also not sufficient to ensure the validity of conclusions resulting from an experiment.

Thus, option E, „all the above‟ (option E) does not hold true either.

Option A correctly emphasizes the author‟s viewpoint of the need to test the validity of theories further, rather than by just carrying out the usual experiments.

Hence, the correct answer is option A.

103: As per Mayo‟s perspective, which of the following best defines the phrase "scientific explanation"?

(A) One which is most detailed in its explanation of natural phenomena.

(B) One which has been thoroughly tested by scientific experts.

(C) One which survives examinations better than other explanations.

(D) One which refutes other explanations convincingly.

(E) All of these.

Solution:

The author quotes Mayo as, "A claim can only be said to be borne out by experiment, and a severe test of the claim must be such that the claim would be unlikely to pass it if it were false." Hence, a scientific explanation would be something which has passed severe tests.

It is not something which is only detailed as mentioned in option A or, only thoroughly tested as mentioned in option B or which survives examinations better as mentioned in option C. It has to go beyond all these. It also has to refute or disprove other explanations convincingly as mentioned in option D.

Hence, the correct answer is option D.

104: The author"s use of Snell's law of refraction to illustrate Mayo"s perspective can best said to be

(A) Contrived.

(B) Premeditated.

(C) Superfluous.

(D) Illustrative.

(E) Inadequate.

Solution:

The author explains Mayo"s point further by giving an example of carrying out a similar test- checking the validity of „Snell"s law of refraction" experimentally and matching up the same with alternatives- other laws on refraction. Thus the approach was an example or an illustration. It was demonstrated or shown. The author wanted to show to his students that if "rough measurements" are taken, the validity of theories cannot be correctly verified. Theories should pass through a more severe test.

It wasn"t manufactured or „contrived" as mentioned in option A.

It was not „premeditated" or planned as suggested by option B.

It was certainly not „superfluous" as mentioned in option C, because the author wanted to convey a message to his students nor was it „inadequate" as mentioned in option E because the message that the author wanted to convey was successfully done with the help of this experiment.

Therefore, „illustrative" is the better description of the act.

Hence, the correct answer is option D.

Analyse the passage given and provide an appropriate answer for the question nos. 105 through 108 that follow.

Enunciated by Jung as an integral part of his psychology in 1916 immediately after his unsettling confrontation with the unconscious, the transcendent function was seen by Jung as uniting the opposites, transforming psyche, and central to the individuation process. It also undoubtedly reflects his personal experience in coming to terms with the unconscious. Jung portrayed the transcendent function as operating through symbol and fantasy and mediating between the opposites of consciousness and the unconscious to prompt the emergence of a new, third posture that transcends the two. In exploring the details of the transcendent function and its connection to other Jungian constructs, this work has unearthed significant changes, ambiguities, and inconsistencies in Jung"s writings. Further, it has identified two separate images of the transcendent function: (1) the narrow transcendent function, the function or process within Jung"s pantheon of psychic structures, generally seen as the uniting of the opposites of consciousness and the unconscious from which a new attitude emerges; and (2) the expansive transcendent function, the root metaphor for psyche or being psychological that subsumes Jung"s pantheon and that apprehends the most fundamental psychic activity of interacting with the unknown or other. This book has also posited that the expansive transcendent function, as the root metaphor for exchanges between conscious and the unconscious, is the wellspring from whence flows other key Jungian structures such as the archetypes and the Self, and is the core of the individuation process. The expansive transcendent function has been

explored further by surveying other schools of psychology, with both depth and non-depth orientations, and evaluating the transcendent function alongside structures or processes in those other schools which play similar mediatory and/or transitional roles.

105: The above passage is most likely an excerpt from:

(A) A research note

(B) An entry on a psychopathology blog

(C) A popular magazine article

(D) A scholarly treatise

(E) A newspaper article

Solution:

The passage is a detailed work and analysis of a Jungian work. A serious psychological theory enunciated by Jung is being analysed and evaluated. Thus, it would be difficult to place it as a newspaper (option E) or a popular magazine article as mentioned in option C.

Also, there is a mention of „this book" in the passage. It may possibly be a review. But, such a detailed analysis makes it a deeper issue! More than it being just a research note- option A or an article on a psychopathology blog as mentioned in option B, it seems more likely to fit in the category of scholarly thesis or exposition as it is detailed and analytical in nature.

Hence, the correct answer is option D.

106: It can be definitely inferred from the passage above that

(A) The expansive transcendent function would include elements of both the Consciousness and the Unconscious.

(B) Archetypes emerge from the narrow transcendent function.

(C) The whole work, from which this excerpt is taken, primarily concerns itself with the inconsistencies in Jung"s writings.

(D) Jung"s pantheon of concepts subsumes the root metaphor of psyche.

(E) The transcendent is the core of the individuation process.

Solution:

Option E is explicitly mentioned in the last paragraph with the mention of expansive transcendental function. "... *the expansive transcendent function*, as a root metaphor for exchanges between conscious and unconscious is the well spring from whence flows other key Jungian structures such as the archetypes and the self, and *is the core of the individuation process.*"

Option A cannot be directly inferred. The expansive transcendent function is a root metaphor for **exchanges** between the conscious and the unconscious. That has not been highlighted in A.

Option B is false as archetypes emerge from the "expansive" and not "narrow" transcendental function.

Apart from inconsistencies, Jung‟s work also essays "changes" and further exploration of Jung‟s theories. Therefore, we can eliminate option C.

Psyche subsumes Jung‟s pantheon and not vice versa. Hence, option D is eliminated.

That leaves us with one option – E, and that too can be verified from the passage.

Hence, the correct answer is option E.

107: A comparison similar to the distinction between the two images of the transcendent function would be:

(A) raucous: hilarious

(B) synchronicity: ontology

(C) recession: withdrawal

(D) penurious: decrepit

(E) none of the above

Solution:

"Expansive" and "narrow" transcendental functions though being different images are related. "Narrow transcendental function" is the uniting of opposites, the conscious and the unconscious from which a new attitude emerges and "expansive transcendent function" is the "interacting with the unknown or the other". Although both are related to each other the nature of relation is difficult to replicate in other pairs of words since they are neither synonymous nor antonymous nor similes nor metaphorical nor falling into any analogous definition.

In option B, "Synchronicity" means „simultaneous,‟ and "Ontology" means „metaphysics‟ or „studying the nature of existence‟; they are unrelated.

"Penurious" and "decrepit" as mentioned in option D though being related are not much different from each other.

"Raucous" meaning „rough or wild‟ and "hilarity" do not show the same kind of comparison as mentioned in the question stem.

"Recession" and "withdrawal"- as mentioned in option C are similar and cannot classify as separate elements.

Hence, the correct answer is option E.

108: As per the passage, the key Jungian structure - other than the Self - that emerges from the expansive transcendent function may NOT be expressed as a(n):

(A) Stereotype

(B) Anomaly

(C) Idealized model

(D) Original pattern

(E) Epitome

Solution:

The key Jungian structure other than "the Self" is "archetype". "Archetype" means „an original model or type after which other similar things are patterned; a prototype". „Stereotype"- option A, „idealized model"- option C, „original pattern"- option D or „epitome"- option E are similar to the meaning or same as archetype. However, an archetype is not an „anomaly" which means „an irregularity or abnormality".

Hence, the correct answer is option B.

Directions (109 -113): Choose the appropriate words to fill in the blanks.

109: Mark Twain was responsible for many striking, mostly cynical _____, such as "Always do right. That will gratify some of the people, and astonish the rest." _____can sometimes end up as _____, but rarely would someone use them as an _____.

(A) epitaphs, Epitaphs, epigrams, epigraph

(B) epigraphs, Epigraphs, epitaphs, epigraph

(C) epigrams, Epitaphs, epigrams, epigraph

(D) epitaphs, Epitaphs, epigraphs, epigram

(E) epigrams, Epigrams, epigraphs, epitaph

Solution:

"Epigram" is „a witty or pointed saying expressed in a few words", whereas, "epitaph" is a „commemorative inscription on a tomb".

"Epigraph" is „an appropriate quotation in the beginning of a book or a chapter". Or, it is put on buildings or statues. Therefore, „Epigrams" can end up as „epigraphs" but rarely will they be put up as „epitaphs". This is because they are witty. Taking into account people"s reverence and sorrow for the dead, few people would put „epigrams" as „epitaphs".

Hence, the correct answer is option E.

110: A candidate in the medical viva voce exam faced a tinge of intellectual _____when asked to spell the_____ gland. The fact that he carried notes on his person would definitely be termed as _____ by faculty, but may be termed as _____ by more generous sections of students.

(A) ambivalence, prostrate, amoral, immoral

(B) ambiguity, prostrate, amoral, immoral

(C) ambivalence, prostrate, immoral, amoral

(D) ambivalence, prostate, immoral, amoral

(E) ambiguity, prostrate, immoral, amoral

Solution:

The gland name that was being asked to spell was the „prostate". If you were sure about this one word, you would have easily got the answer by eliminating the others, as the other four options mention „prostrate" which means „to lie face down."

Otherwise, we go blank by blank and see if we can still find the answer. If some students were generous enough, they would not have found the student"s act same as the teachers", which is „immoral" which means „to violate moral principles". They would have found it „amoral" which means „having no or being indifferent to moral standards". With that, options A and B can be eliminated.

„Ambivalence" is uncertainty or fluctuation between two choices and is a better word than „ambiguity" which means „confusion". With that, we could have zeroed in on to two options, C and D. After that, either we depend on luck - which has certainly become better as we are down to 2 options from 5 - or depend on our certainty of the spelling of „prostate" to get the right answer.

Hence, the correct answer is option D.

111: It is not_____ democratic that the parliament should be _____ on issues and resort to passing
_____ rather than have an open debate on the floor of the house.

(A) quite, quite, ordinances

(B) quite, quiet, ordnances

(C) quiet, quite, ordnances

(D) quite, quiet, ordinances

(E) quiet, quiet, ordinances

Solution:

The second blank should be „quiet", meaning „silent". You have eliminated options A and C.

The first blank cannot have „quiet"; it should be „It is not quite democratic…".

While "ordnance" is related to „artillery" or „military armaments", "ordinance" is related to „decree" or „command". The parliament should be having debates or discussions, and should not be passing „ordinances" or „commands".

Hence, the correct answer is option D.

112: In a case of acute _____, _____ membranes secrete excessive_____.

(A) sinus, mucous, mucous

(B) sinus, mucus, mucous

(C) sinus, mucous, mucus

(D) sinusitis, mucus, mucous

(E) sinusitis, mucous, mucus

Solution:

"Sinusitis" is a disease.

"Sinus" is „a hollow space within the bones in the skull". In fact, "sinusitis" is a disease in which the lining of the "sinus" becomes swollen. Thus we can eliminate options A, B and C.

Between options D and E, option E is the correct option.

"Mucous" - „tissue which holds mucus", contains "mucus" which is „a secreted thick liquid".

Hence, the correct answer is option E.

113: If a person makes the statement: "I never speak the truth." The person can be said to be____.

(A) speaking the truth.

(B) lying.

(C) lying as well as speaking the truth

(D) making a logically contradictory statement.

(E) partially speaking the truth and partially lying.

Solution:

If a person says that he never speaks the truth, there can be two possibilities.

One, if he is lying here than accordingly the true statement becomes, „I always speak the truth". How can that be possible if he is lying here?

Secondly, if he is speaking the truth, then the statement that he has uttered becomes a lie.

Therefore, it is logically contradictory in both cases.

Hence, the correct answer is option D.

Analyse the following passage and provide an appropriate answer for the question nos. 114 through 120 that follow.

India is renowned for its diversity. Dissimilitude abounds in every sphere - from the physical elements of its land and people to the intangible workings of its beliefs and practices. Indeed, given this variety, India itself appears to be not a single entity but an amalgamation, a "constructs" arising from the conjoining of innumerable, discrete parts. Modem scholarship has, quite properly, tended to explore these elements in isolation. (In part, this trend represents the conscious reversal of the stance taken by an earlier generation of scholars whose work reified India into a monolithic entity - a critical element in the much maligned "Orientalist" enterprise.) Nonetheless, the representation of India as a singular "Whole" is not an entirely capricious enterprise; for India is an identifiable entity, united by - if not born out of - certain deep and pervasive structures. Thus, for example, the Hindu tradition has long maintained a body of mythology that weaves the disparate temples, gods, even geographic landscapes that exist throughout the subcontinent into a unified, albeit syncretic, whole.

In the realm of thought, there is no more pervasive, unifying structure than *karma*. It is the "doctrine" or "law" that ties actions to results and creates a determinant link between an individual"s status in this life and his or her fate in future lives. Following what is considered to be its appearances in the Upanishads, the doctrine reaches into nearly every corner of Hindu thought. Indeed, its dominance is such in the Hindu world view that *karma* encompasses, at the same time, life-affirming and life-negating functions; for just as it defines the world in terms of the "positive" function of delineating a doctrine of rewards and punishments, so too it defines the world through its "negative" representation of action as an all but inescapable trap, an unremitting cycle of death and rebirth.

Despite - or perhaps because of - *karma's* ubiquity, the doctrine is not easily defined. Wendy Doniger O"Flaherty reports of a scholarly conference devoted to the study of *karma* that although the participants admitted to a general sense of the doctrine"s parameters, considerable time was in a "lively but ultimately vain attempt to define…karma and rebirth". The base meaning of the term "*karma*" (or, more precisely, in its Sanskrit stem form, *karman* a neuter substantive) is "action". As a doctrine, *karma* encompasses a number of quasi-independent concepts: rebirth (*punarjanam*), consequence (*phala*, literally "fruit," a term that suggests the "ripening" of actions into consequences), and the valuation or "ethic-ization" of acts, qualifying them as either "good" (*punya* or *sukarman*) or "bad" (*papam* or *duskarman*).

In a general way, however, for at least the past two thousand years, the following (from the well known text, the *Bhagavata Parana*) has held true as representing the principal elements of the *karma* doctrine: "The same person enjoys the fruit of the same sinful or a meritorious act in the next world in the same manner and to the same extent according to the manner and extent, to which that (sinful or meritorious) act has been done by him in this world." Nevertheless, depending on the doctrine"s context, which itself ranges from its appearance in a vast number of literary sources to its usage on the popular level, not all these elements may be present (though in a general way they may be implicit).

114: The orientalist perspective, according to the author:

(A) Viewed India as a country of diversity.

(B) Viewed India as if it was a single and unitary entity devoid of diversity.

(C) Viewed India both as single and diverse entity.

(D) Viewed India as land of karma.

(E) Viewed India in the entirety.

Solution:

Paragraph 1 mentions, "…scholars whose work reified India as a *monolithic entity* - a critical element in the much maligned „Orientalist" enterprise". Thus, India was said to be a single and not diverse entity, as per the "orientalist" perspective.

"Monolithic" means „one" or „total uniformity". Option B cites this. The other options mention otherwise.

Hence, the correct answer is option B.

115: "Reify" in the passage means:

(A) To make real out of abstract

(B) Reversal of stance

(C) Unitary whole

(D) Diversity

(E) Unity in diversity

Solution:

"Reify" means „to make a concept concrete" or „to think of something that is abstract as an actual object". Option A comes closest to that. Otherwise, from context, „…scholars whose work reified India as a monolithic entity…", it can be understood that their work made India seem something of a whole which was not the case in reality.

Hence, the correct answer is option A.

116: "Ethic-ization" in the passage means

(A) Process of making something ethical

(B) Converting unethical persons into ethical

(C) Judging and evaluation

(D) Teaching ethics

(E) None of the above

Solution:

The passage explains "ethic-ization of acts" as **qualifying** them as either good or bad, or, qualifying them as either „*punya'* or „*papam'*. „Qualifying" here does not stand for either „teaching" or „converting" or „making". The passage states, "The same person enjoys the fruit of the same sinful or a meritorious act in the next world in the same manner and to the same extent according to the manner and extent to which that (sinful or meritorious) act has been done by him in this world." Therefore "ethic-ization of acts" means deciding or evaluating or judging.

Hence, the correct answer is option C.

117: Consider the following statements:

1. Meaning of karma is contextual.

2. Meaning of karma is not unanimous.

3. Meaning of karma includes many other quasi-independent concepts.

4. Karma also means actions and their rewards.

Which of the statements are true?

(A) 1,2,3

(B) 2,3,4

(C) 1,3,4

(D) None of the above

(E) All the four are true

Solution:

The meaning of karma is contextual because the last paragraph of the passage mentions "Nevertheless, depending on the doctrine"s *context*, which itself ranges from its appearance in a vast number of literary sources to its usage on the popular level, not all these elements may be present". Therefore, statement 1 is true.

From the penultimate paragraph of the passage, it can be determined that karma does contain several quasi-independent concepts. Hence, statement 3 is also true.

According to the passage, „Despite - or perhaps because of - karma"s ubiquity, it is not easily defined". Also, because of more than one concept underlying the meaning of the word, the meaning is not unanimous. In support of that, the passage also states that there was a vain attempt to define karma. Thus, statement 2 is also true.

Statement 4 can be validated as well from the penultimate paragraph of the passage (actions = consequences = rewards).

Hence, the correct answer is option E.

118: The base meaning of karma is:

(A) reward and punishment.

(B) only those actions which yield a "phala".

(C) any action.

(D) ripening of actions into consequences.

(E) None of the above.

Solution:

The answer is easily derivable from the third paragraph of the passage, where it is specifically mentioned that the base meaning of "karma" (or, more particularly *karman)* is „action". The action could be „good" or „bad" with very different consequences.

Hence, the correct answer is option C.

119: As per the author, which of the following statements is wrong?

(A) India is a diverse country.

(B) Doctrine of karma runs across divergent Hindu thoughts.

(C) Doctrine of karma has a rich scholarly discourse

(D) Scholars could not resolve the meaning of karma

(E) Modern scholars have studied Hinduism as a syncretic whole.

Solution:

Option A is mentioned in paragraph 1, "India is renowned for its diversity".

Option C is mentioned explicitly from the following extract, "…reports of a *scholarly conference* devoted to the study of karma...".

Option D is also mentioned explicitly from the following extracts, "from a scholarly conference..." and "*...lively but ultimately vain attempt to define...karma and rebirth."*

Option E is also mentioned in the first paragraph, "…the Hindu tradition has long maintained a body of mythology that weaves the disparate temples, gods, even geographic landscapes that exist throughout the subcontinent into a unified, albeit syncretic, whole".

Only option B is not mentioned. Although the doctrine has been stated as „pervasive", nothing about it running across „divergent" Hindu thoughts has been mentioned.

Hence, the correct answer is option B.

120: Which of the following, if true, would be required for the concept of karma - as defined in Bhagavata Purana - to be made equally valid across different space-time combinations?

(A) Karma is judged based on the observers" perception, and hence the observer is a necessary condition for its validity.

(B) Karma is an orientalist concept limited to oriental countries.

(C) Each epoch will have its own understanding of karma and therefore there can not be uniform validity of the concept of karma.

(D) The information of the past actions and the righteousness of each action would be embodied in the individual.

(E) Each space-time combination would have different norms of righteousness and their respective expert panels which will judge each action as per those norms.

Solution:

In the fourth paragraph, the passage states that, "the same person enjoys the fruit of the same meritorious or sinful act in the next world, in the same manner and to the same extent, according to the manner and extent to which that act has been done by him in this world". To carry these acts forward from one world to the next, there should be some way of representing or personifying (embodying) such acts. That idea is best represented by option D.

The observer part of option A cannot be validated with any certainty.

Nothing about it being "Orientalist" as mentioned in option B or it being limited to that sphere has been stated in the passage.

Although options C and E seem possible, they are very farfetched inferences that cannot be gleaned from the passage. Moreover, neither of these options give an answer to „how the concept could be validated?".

Hence, the correct answer is option D.