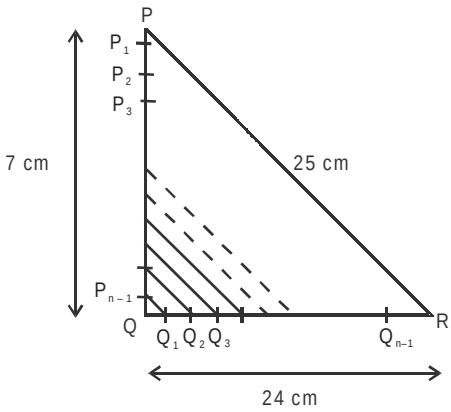
Proctored Mock CAT-6 2011
Answers and Explanations

1	c	**2**	d	**3**	a	**4**	d	**5**	a	**6**	c	**7**	b	**8**	c	**9**	b	**10**	c
11	d	**12**	c	**13**	b	**14**	c	**15**	b	**16**	b	**17**	a	**18**	d	**19**	b	**20**	a
21	b	**22**	b	**23**	d	**24**	a	**25**	c	**26**	c	**27**	c	**28**	a	**29**	a	**30**	b
31	d	**32**	c	**33**	a	**34**	b	**35**	c	**36**	d	**37**	b	**38**	d	**39**	c	**40**	a
41	c	**42**	a	**43**	d	**44**	c	**45**	c	**46**	c	**47**	a	**48**	b	**49**	b	**50**	c
51	c	**52**	d	**53**	d	**54**	c	**55**	a	**56**	b	**57**	a	**58**	b	**59**	d	**60**	b

1. c



$\Delta P_{n-1}QQ_1 \sim \Delta PQR$

$\therefore \frac{P_{n-1}Q}{PQ} = \frac{QQ_1}{QR} = \frac{P_{n-1}Q_1}{PR} = \frac{1}{n}$

$\Rightarrow P_{n-1}Q_1 = \frac{25}{n}$

Similarly, $P_{n-2}Q_2 = \frac{25\times 2}{n}$ and so on…

$\Rightarrow \frac{25}{n} + \frac{25\times 2}{n} + \frac{25\times 3}{n} + ... + \frac{25(n-1)}{n} = 200$

$\Rightarrow \frac{25}{n}(1+2+3+...+n-1) = 200$

$\Rightarrow \frac{(n-1)(n)}{2n} = 8 \Rightarrow n = 17.$

2. d $\frac{\left(x^3-5x^2+7x-3\right)\left(x^3-5x^2+8x-4\right)}{\left(x-2-x^2\right)\left(x^2-3x+2\right)\left(x^2+3x+4\right)} \geq 0$

$\Rightarrow \frac{\left\{(x-1)^2(x-3)\right\}\left\{(x-2)^2(x-1)\right\}}{\left(x-2-x^2\right)(x-1)(x-2)\left(x^2+3x+4\right)} \geq 0$

$\Rightarrow \frac{(x-1)^3(x-2)^2(x-3)}{\left(x-2-x^2\right)(x-1)(x-2)\left(x^2+3x+4\right)} \geq 0$

$\Rightarrow \frac{(x-1)^2(x-2)(x-3)}{\left(x^2+2-x\right)\left(x^2+3x+4\right)} \leq 0$

As the Discriminant of both $x^2 + 2 – x$ and $x^2 + 3x + 4$ is negative, it can be concluded that the denominator of the above inequality is greater than zero for all real values of x.

So the inequality reduces to

$\Rightarrow (x-2)(x-3) \leq 0$, where x cannot be equal to 2.

$\Rightarrow x \in (2, 3]$

3. a The number of ways of selecting three books $= {}^{10}C_3 = 120$

The number of ways of selecting two books lying adjacently = 9

The number of ways of selecting the third book such that exactly two books are lying adjacently

$= 7 \times 2 + 6 \times 7 = 56$

The number of ways of selecting three books lying adjacently = 8

So the required number of ways = 120 – 56 – 8 = 56

4. d Three operations have been given:

(i) $x\Delta(y+1) = y\Delta(x+1)$

(ii) $x\Delta x = 1$

(iii) $(x-y)\Delta(x+y) = x\Delta y$

Putting x = 1000 and y = 1001 in operation (i), we get

$1000\Delta 1002 = 1001\Delta 1001$

From operation (ii), $1001\Delta 1001 = 1$

$\therefore 1000\Delta 1002 = 1$

Putting x = 1001 and y = 1 in operation (iii), we get

$\therefore 1000\Delta 1002 = 1001\Delta 1$

$\therefore 1001\Delta 1 = 1$

5. a The product of the marks obtained = 72

As Rohan was not able to figure out the marks obtained by Sunil initially, there must be at least two possible ways of getting that same sum. The two possible cases are 2, 6, 6 and 3, 3, 8 (Sum = 14).

When Rohan got to know that Sunil got the highest in Physics among the three subjects, he could answer correctly as this is possible only with 3, 3 and 8.

Therefore, the sum of the marks obtained by Sunil in the other two subjects is 3 + 3 i.e. 6.

6. c A fraction is said to be in its simplest form when the numerator and the denominator are co-prime.

If we observe the fractions carefully, we find that in each term a remainder of 2 is left when the integer part of the numerator is divided by the denominator. E.g. 2 by 10, 13 by 11, 26 by 12, 41 by 13, and so on.

The fractions can be written as:

$\frac{[x]+2}{10}, 1+\frac{[x]+2}{11}, 2+\frac{[x]+2}{12}, 3+\frac{[x]+2}{13}$ and so on...

Thus 'x' needs to be such that [x] + 2 is co-prime with 10, 11, 12, …49 and 50.

Among the options, the only such value is 51.51.

7. b We have the following alternate sequences of odd and even terms:

Number of Terms	Terms
1	1
2	2,4
3	5,7,9
4	10,12,14,16
5	17,19,21,23,25
6	26,28,30,32,34,36
7	37,39,41,43,45,47,49
8	50,52,54,56,58,60,62,64

If we observe the sequences carefully the last term in any sequence is the square of the number of terms, i.e. when n = 3, last term = 9; when n = 4, last term = 16; when n = 8, last term = 64 and so on…
Also, the total number of terms in the sequence is the sum of the number of terms in the alternate sequences of even and odd terms.

Since $\frac{62 \times 63}{2} = 1953$, we can say that the 2003^{rd} term will lie in a sequence of odd terms and will be the 50^{th} term in that sequence. The last term in the sequence of even terms with n = 62 will be $62^2 = 3844$. Hence, the next odd sequence begins at 3845. The 50th term in this sequence will be 3845 + 49 × 2 = 3943.

8. c logA, logB and logC are in Arithmetic Progession.

$\Rightarrow 2\log B = \log A + \log C$

$\Rightarrow B^2 = A \times C$ ...(i)

Also, $C = B^{\frac{t}{120}}$ and $A = B^{\frac{t}{60}}$
Putting these values in equation (i), we get

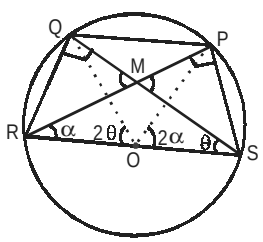
$B^2 = B^{\frac{t}{60}} \times B^{\frac{t}{120}}$

$\Rightarrow \frac{t}{60} + \frac{t}{120} = 2$

$\Rightarrow \frac{3t}{120} = \frac{t}{40} = 2$

$\Rightarrow t = 80$

9. b



Let $\angle QSR = \theta$

$\therefore \angle QOR = 2\theta$
(The angle subtended by a chord at the center is twice the angle subtended by the same chord at the circumference.)

Let $\angle PRS = \alpha$

$\therefore \angle POS = 2\alpha$

$\therefore \angle QOR + \angle POS = 2\alpha + 2\theta$

Also, $\angle PMS = \angle QMR = \alpha + \theta$
(The exterior angle of a triangle is equal to the sum of the interior opposite angles.)

10. c Let the number of male players be 2x; therefore, the number of female players will be x.
The number of matches among male players

$= {}^{2x}C_2 = \frac{2x(2x-1)}{2}$

The number of matches among female players

$= {}^{x}C_2 = \frac{x(x-1)}{2}$

The number of matches between a male and a female player = $2x^2$
Let's assume that a male player defeated a female player 'n' times. Therefore, a female palyer must have defeated a male player ($2x^2 - n$) times.

$\Rightarrow \frac{2x(2x-1)}{2} + n = \frac{x(x-1)}{2} + 2x^2 - n$

$\Rightarrow x(x+1) = 4n$
Among the options, n = 39 is the only possible value.

11. d **Case I:** The number of terms 'n' is odd.
The middle term will be the average of all the terms. Let the average be k.

$\therefore k \times n = 1000$
(Both k and n are natural numbers.)
Odd factors of 1000 are 1, 5, 25 and 125.
(i) When n = 5, k = 200, the consecutive numbers are from 198 to 202.
(ii) When n = 25, k = 40, the consecutive numbers are 28 to 52.
(iii) When n = 125, k = 8, the consecutive numbers will not be natural numbers.

Case II: The number of terms 'n' is even.
The average of the middle two terms will be the average of all the terms. Let the average be k.

$\therefore k \times n = 1000$
(n is a natural number and k is a positive rational number whose decimal part is 0.5.)
(i) When n = 16, k = 62.5, the consecutive numbers are from 55 to 70.
(ii) When n = 80, k = 12.5, the consecutive numbers will not be natural numbers.
(iii) When n = 400, k = 2.5, the consecutive numbers will not be natural numbers.
So the total number of possible ways is 3.

12. c Let the exterior angles of the quadrilateral be x, 3x, 4x and 7x.
So x + 3x + 4x + 7x = 15x = 360° (The sum of the exterior angles of a polygon is 360°.)
So x = 24°
The largest interior angle = 180° – 24° = 156°
The smallest interior angle = 180° – (7 × 24)° = 12°
The required sum = 156° + 12° = 168°

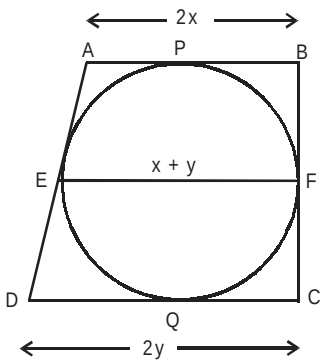
13. b $x + y = 8 \Rightarrow x = 8 - y$

$\therefore P = 5(8-y)^2 + 11y^2$

$\Rightarrow P = 320 + 5y^2 - 80y + 11y^2$

$\Rightarrow P = (4y-10)^2 + 220$
P will be minimum when $(4y - 10)^2$ is equal to 0.
$\therefore$ P (min) = 220

14. c



Let the trapezium be ABCD (see the figure given above) and the longer parallel side be CD.
Let the length of the side AB be '2x' cm and the length of the side CD be '2y' cm.
Let '2h' cm be the shortest distance between AB and CD.
E and F are the midpoints of AD and BC respectively (which may not be the points of contact of the trapezium and the circle).

$\therefore$ the length of $EF = \frac{AB + CD}{2} = \frac{2x + 2y}{2} = x + y$ cm

The area of trapezium $ABFE = \frac{1}{2} \times h \times (3x + y)$ cm^2

The area of trapezium $EFCD = \frac{1}{2} \times h \times (x + 3y)$ cm^2

$\frac{\text{Area(ABFE)}}{\text{Area(EFCD)}} = \frac{3x + y}{x + 3y} = \frac{3}{5} \Rightarrow \frac{x}{y} = \frac{AB}{CD} = \frac{1}{3}$ ...(i)

Also, AB + CD = BC + AD
(Since, ABCD is a tangential quadrilateral.)
$\therefore$ AB + CD = 16 cm
$\Rightarrow$ 2x + 2y = 16 and x + y = 8
From equation (i), x = 2 and y = 6
$\therefore$ the length of CD = 2y = 12 cm

15. b By the time Manu completes 12 rounds, Ankur will complete $\frac{5}{9} \times 12 = 6\frac{2}{3}$ rounds. At this point in time Ankur is moving towards B and is 280 metres away from A whereas Manu is at B.

They will meet at a distance of $9 \times \left(\frac{420 - 280}{5 + 9}\right) = 90$ metres from B. This point will be at a distance of 420 – 90 = 330 metres from A.

16. b $2\log(x - 2y) = \log x + \log y$

$\Rightarrow (x - 2y)^2 = xy$

$\Rightarrow \left(\frac{x}{y} - 2\right)^2 = \frac{x}{y}$

Putting $\frac{x}{y} = t$ in the above equation,

$t^2 - 5t + 4 = 0$

$\Rightarrow (t-1)(t-4) = 0$

$\Rightarrow t = 1$ or 4
But x cannot be equal to y as log is not defined for negative numbers.

Hence, $\frac{x}{y} = 4$ is the only possible solution.

17. a Let the number of students who play exactly three, exactly two and exactly one sport be x, y and z respectively.
Hence, x + y + z = 140 and 3x + 2y + z = 200.
Solving the two equations, we get 2x + y = 60.
It is given that (x + y) : x = 3 : 2.
Solving, we get x = 24 and y = 12.
Hence, 12 students play exactly two of the three sports.

18. d Let the volume of each container be 315 units.
The total volume of the three containers is 945 units.
Hence, the volume of water in three containers is 126, 135 and 140 units respectively and that of alcohol is 189, 180 and 175 units respectively.
The ratio of water and alcohol in the bigger container = 401 : 544
Let the volume of the mixture that needs to be replaced by water be x units. Hence,

$401 - 401 \times \frac{x}{945} + x = 544 - 544 \times \frac{x}{945}$

$\Rightarrow x = \frac{143 \times 945}{1088}$

So the fraction of the mixture that needs to be replaced

$= \frac{143}{1088}$

19. b Let the 5th term of the A.P. be 'a' and the common difference be 'd'. The 6th term will be (a + d) and the 9th term will be (a + 4d).
Therefore, a×(a + d) = 300 ...(i)
and 5a + 4 = (a + 4d)
$\Rightarrow$ d = a + 1 ...(ii)

Solving (i) and (ii), we get a = 12 or $-\frac{25}{2}$.

If a = $-\frac{25}{2}$, then the value of 'd' will also be negative, which is not possible in an increasing A.P.
Therefore, a = 12 and d = 13.
The first term will be = (a – 4d) = 12 – 52 = –40.

20. a Let the amount of work (in units) completed by a man, a woman and a child in a day be M, W and C respectively.

The amount of work (in units) completed by 4 men in 12 days = 4 × 12 × M = 48M.
The amount of work (in units) completed by 6 women in 10 days = 6 × 10 × W = 60W.
The amount of work (in units) completed by 8 children in 9 days = 8 × 9 × C = 72C.

So 48M = 60W = 72C
or 4M = 5W = 6C = 60K (say)
Hence, M = 15K, W = 12K and C = 10K.

The amount of work (in units) completed by a man, a woman and a child together in 10 days
= (15 + 12 + 10)K × 10 = 370K.

The amount of work (in units) completed by 2 women and 5 children together in a day
= (2 × 12 + 5 × 10)K = 74K.

Hence, the answer = $\frac{370}{74}$ = 5 days.

21. b Three companies – Superb Diary, Gopal Jee and Jusico.

22. b Four companies – Trimul, Superb Diary, Natural & Fresh and Real Fruits.

For questions 23 to 25:
From statement (iv), the total weight of Baking Powder, Eggs and Milk used in a cake is 200 g. Therefore, the total quantity of the remaining ingredients used is 800 g.
Let the quantity (in g) of Wheat Flour and Sugar Free used in a cake be x and y respectively. Therefore, from statements (i) and (ii), quantity (in g) of Fruit pieces and Cream used is 3x and 3y respectively.
$\Rightarrow$ x + y + 3x + 3y = 800 and x + y = 200

The total cost (in Rs.) of Baking Powder, Eggs and Milk used in a cake is 35 + 12 + 3 i.e. 50.

Cost (in Rs.) of Wheat flour used is $\frac{50}{100}$x i.e. $\frac{x}{2}$.

Cost (in Rs.) of Sugar Free used is $\frac{200}{100}$y i.e. 2y.

The total cost (in Rs.) of the fixed ingredients used is

$50 + \frac{x}{2} + 2y$.

As x + y = 200, the values of x and y in different types of cake can be calculated as given below:

I. Mango Cake:

$\frac{30}{100} \times 3x + \frac{60}{100} \times 3y = 50 + \frac{x}{2} + 2y$

On solving, x = 150 and y = 50.

II. Pineapple Cake:

$\frac{20}{100} \times 3x + \frac{90}{100} \times 3y = 50 + \frac{x}{2} + 2y$

On solving, x = 150 and y = 50.

II. Banana Cake:

$\frac{40}{100} \times 3x + \frac{50}{100} \times 3y = 50 + \frac{x}{2} + 2y$

On solving, x = 125 and y = 75.

II. Fresh Fruitcake:

$\frac{30}{100}x + \frac{20}{100}x + \frac{40}{100}x + \frac{70}{100} \times 3y = 50 + \frac{x}{2} + 2y$

On solving, x = 100 and y = 100.

The table given below shows the cost incurred on preparing the different types of cakes.

Cake	Cost Price(in Rs.)
Mango Cake	450
Pineapple Cake	450
Banana Cake	525
Fresh Fruitcake	600

23. d Fresh Fruitcake

24. a Mango Cake and Pineapple Cake

25. c 525 g

26. c As N has exactly 24 factors, N can be of the form p^{23}, pq^{11}, p^2q^7, p^3q^5, pqr^5, pq^2r^3 or $pqrs^2$, where p, q, r and s represent different prime numbers.

From Statement A:
As the number of factors of the resultant number is less than twice the number of factors of N, 3 must be a factor of N. Thus N can be of the form p^2q^7, pq^2r^3 or $pqrs^2$, where the prime factor raised to the power 2 represents 3. But we cannot determine the number of factors of N^3 with certainty and hence this statement alone is not sufficient.

From Statement B:
As the number of factors of the resultant number is less than twice the number of factors of N, 5 must be a factor of N. Thus N can be of the form p^3q^5 or pq^2r^3, where the prime factor raised to the power 3 represents 5. But we cannot determine the number of factors of N^3 with certainty and hence this statement alone is not sufficient.

From Statements A and B:
The only possibility is that N is of the form pq^2r^3.
$\therefore N^3 = p^3q^6r^9$ and the number of factors of $N^3 = 4 \times 7 \times 10 = 280$.

27. c Let the total investment (in Rs. Crores) across the country in 2009 and 2010 be 100x and 100y respectively.

$$\Rightarrow \frac{56}{100} \times 5x = 700 \Rightarrow x = 250$$

$$\Rightarrow \frac{15}{100} \times 12y = 450 \Rightarrow y = 250$$

The total investment made across the country in 2009 and 2010 is the same i.e. Rs. 25,000 crores.
Required percentage change

$$= \frac{55\% - 45\%}{55\%} \times 100 = 18.18\%.$$

28. a Investments (in Rs. Crores) made by Gujarat and Assam together in R&D in:

$$2009 = \frac{900}{3} = 300$$

$$2010 = \frac{1,350}{3} = 450$$

Let the total investments (in Rs. Crores) of the two states together in 2009 and 2010 be x and y respectively.

$$\therefore \frac{300}{x} \times 1.2 = \frac{450}{y} \text{ and } \frac{x}{y} = \frac{4}{5}$$

$$\therefore \text{Required ratio} = \frac{4}{0.3} : \frac{5}{0.25} = 2:3.$$

29. a Let the total investment (in Rs. crores) made across the country in 2009 and 2010 be 100x and 100y respectively.

$$\therefore \frac{3x - 274}{5y - 548} = \frac{1}{2} \text{ and } \frac{x}{y} = \frac{5}{6}$$

$\therefore$ Required percentage change

$$= \frac{600 - 500}{500} \times 100 = 20\%.$$

30. b Let the ages of Komal, Dhara, Jyoti, Sarla and Neha be represented by K, D, J, S and N respectively. It is given that S < J, K and N < J < D.

From Statement A:

We have $\frac{K + D}{2} < \frac{J + N}{2}$.

As we already know that N < J < D, the only possible case is that K is less than N. From this it can be concluded that S < K < N < J < D. Hence, this statement alone is sufficient to answer the question.

From Statement B:

We have $\frac{D + J}{2} < \frac{K + N}{2}$.

As we already know that N < J < D, the only possible case is that K is more than D. We can conclude that either S < N < J < D < K or N < S < J < D < K. Hence, this statement alone is sufficient to answer the question.

31. d The author follows an analytical style by discussing the components of microfinance in India -initiation, strength, definition and types of organizations that partake in this activity. The author avoids personal opinion and stays with an analysis that comes across as unbiased. Option (a) is incorrect as the passage does not conjure up an image of microfinance nor does it describe the characteristics of microfinance. Option (b) is also incorrect because the author does not instruct the reader on how to obtain microfinance or on the steps required for entering into this sector. Option (c) is incorrect because the author does not provide facts, data, and statistics. The author's aim is to understand microfinance in India .

32. c In the second paragraph the author clearly states option (c). Option (d) is incorrect as this is a criticism and not a strength. Option (a) and (b) have been mentioned in the passage but they have not been given as strengths of the microfinance organizations in India.

33. a The author brings a distinction between an SHG and a commercial bank in these statements. According to the passage, in India the definition changes with the change in loan giving entity. Option (b) is the exact opposite of the correct answer. Option (c) does not provide a reason, It only repeats a statement from the passage.

34. b The last paragraph helps understand the reason why SIFFS started independent microfinance activity. Refer to the lines "For instance... it started providing loans itself". Options (a),(c) and (d) are all factually incorrect.

35. c Author has given the example of Homer and The South American Empire of the Incas to explain how even without written communication poetry survived and everyday administrative works could be carried out. Through these examples he wants to illustrate that written communication, although important, is not necessary for survival of a text or of a civilization. Hence, option (c) is the correct answer.

36. d Refer to the first paragraph "Writing, though not obligatory, is a defining marker of civilization. Without writing there can be no accumulation of knowledge, no historical record, no science (though simple technology may exist), and of course no books, newspapers, emails, or World Wide Web". Therefore, option (d) is correct in the light of the information given in the passage.

37. b The passage deals with some approaches to institutional reform that Tom O'Riordan identifies in his book *Environmentalism*. O'Riordan describes one of these strategies in detail. He does not "suggest" any particular strategy. So option (a) is incorrect. The author does not identify the steps necessary for institutional reform, but describes Ophuls' strategy in detail. Hence, option (d) is also ruled out. The passage does not describe various approaches to creating an eco-cratic society but concentrates on Ophuls' version of the same. Hence option (c) is also eliminated.

38. d Although Ophuls stresses on the need for "ecological guardians" instead of a democratic setup to ensure an eco-cratic society, it does not follow that no judicial decisions can be taken in a democratic society. Option (a) is incorrect. Ophul's ideology is described as a "green Leviathan" because it talks about a political state where ecology is cared for but democracy is missing. The statement in option (b) fails to provide a justified reason for the idealogy being called as green leviathan (as it misses the environment friendly aspect) and is thus incorrect. While Ophuls stresses on the need for "a class of ecological guardians", he dos not mention whether individual accountability will be proportional to individual capability in such a society. Option (d) follows from the passage. O'Riordan "considers only one position, one centered on the nation-state, centralized authoritarianism."

39. c Ophuls stresses the need for ecological guardians. He also mentions that in the steady state society "only those possessing the ecological and other competences to make prudent decisions" will be allowed full participation in the political process. He also says "….possess the esoteric knowledge needed to run it well.". This means that Ophuls assumes that ecological awareness does not come naturally to humans. Option (a) is incorrect. In a steady-state society, "population and the means of subsistence are in balance." This does not assume that resources will not be limited. Option (b) cannot be inferred from the passage. Option (d) is incorrect since "ecological and other competences to make prudent decisions" is mentioned.

40. a DEABC
Sentence D introduces the subject of the paragraph and is thus the apt opening sentence. As can be seen in the options that E follows D (the 'it' in E refers to the significance of recantation). The 'it' in A also refers to the significance of recantation. Thus, DEA is a sequence. B follows A as sentence B states that apart from these questions (raised in E and A) there was something else too. C answers the questions and provides a complete picture. Thus it is best suited as an ending sentence.

41. c For the first blank both *encompass* which means to include a large number or range of things and *promote* which means to help something to happen or develop are appropriate. But for the second blank, *collaboration* which means the act of working with another person or group of people to create or produce something is more appropriate. *Agglomerate* means a mass or collection of things is logically incorrect in the context of individuals and organization. Moreover the preposition '*between*' works well with collaboration and '*of*' is fit with agglomerate. Hence, option (c) is the correct option.

42. a Since the sentence indicates that the budget will be planned based on income and savings goals – these have to be of a current nature and not planned or estimated. Logic has to be used in this context to establish the answer as option a.

43. d *Agree with* is correct in the given context. It means something is suitable/pleasing/ appropriate. It is used as: agree with a person, opinion or policy. e.g. The copy agrees with the original. I don't agree with some of the issues they have raised in the rating rationale. "Our views on religion agree" means that our views are in accord and therefore the sentence is correct. *Agree to* her analysis is incorrect. The correct sentence is "I *agree with* her analysis of the situation."

44. c *By* is incorrect in this sentence. The correct sentence should be '*They traveled on the 6.45 train'*. 'by' can be used when we are describing the mode of transport in general (*I traveled by train .).* On is used when we are talking about a particular transport (train etc) like the 6.45 train. Therefore (c) is incorrect. 'Sit by me' means sit beside me

45. c *Station* is a countable noun and should be preceded by an article (a/the). So (1) is incorrect. Your's is incorrect. The correct possessive form is *yours*. Sentences(3) and (4) are correct.

46. c Sentence (1) is incorrect. The correct expression is *as soon as he arrives.* Sentence (3) is incorrect. The correct expression is *what he wants.* Sentence (2) and (4) are correct.

47. a ABAAA
Slightest means very small in degree<There was not the slightest hint of trouble.> <He is, without the slightest doubt, the greatest living novelist.> <He never had the slightest intention of agreeing to it>. As we are talking about *idea*, small or large size does not make sense. *Slightest* is a better choice for the first sentence. *Rely on* somebody means to depend on somebody; or to have faith in somebody. *Relied* is the correct choice for sentence (2) because of the preposition *on.* Request is used when one asks for something politely and formally whereas demand carries a hint of authority. *I would like* suggests that *request* is more appropriate than *demand* in the given sentence. *Have a thin time* or *going through a thin time* means to have many problems or difficulties to deal with; to not be successful <He's had a thin time of it since losing his job>. So *thin time* is idiomatically correct in the given context. *Ideal* is an adjective and means perfect whereas *idyll* is a noun and means a happy and peaceful place, event or experience, especially one connected with the countryside; a short poem or other piece of writing that describes a peaceful and happy scene. So *ideal* is the correct choice.

48. b AAAAA
As is used to describe the fact that somebody/ something has a particular job or function <She works as a courier> <Treat me as a friend> <I respect him as a doctor>. *Of* means belonging to something; being part of something; relating to something <the lid of the box> <the director of the company> < a member of the team>. So, *as* is appropriate in the given context. *Causal* means expressing or indicating cause <the causal relationship between poverty and disease>. *Casual* means not showing much care or thought; seeming not to be worried; not wanting to show that something is important to you. So *causal* is the apt word for the given sentence. *Custom* which means an accepted way of behaving or of doing things in a society or a community is the apt word for the third sentence. *Suspect* means to have an idea that something is probably true or likely to happen, especially something bad, but without having definite proof. So suspect is correct for the fourth sentence. *Economics* (noun), as used here, means the way in which money influences, or is organized within an area of business or society. Economic (adjective) means profitable < Small local shops stop being economic when a supermarket opens up nearby>. Because we need a noun in the given sentence, therefore *economics* is the apt word.

49. b The paragraph is a first person narrative and ends with a description of Byron and his relations. The author has used Byron to show contrast between him and Byron. It should be followed by the sentence that continues the talk about relations to the art and culture and provides the comparison by presenting the author's relations. Hence, option b is the correct option.

50. c The paragraph talks about the lengthy poems losing their charm in the current age. Author does not really appear to endorse this idea while talking of *Bothwell*. He says we would not like being deprived of the *Bothwell* of Mr. Swineburne despite its large size. He is inclined to say that size should not be a criterion for judging a poem. A sentence that expresses the same is required to complete the paragraph. Hence, option (c) fits the bill. Option (b) is incorrect as it talks about the subject of a work of art rather than the beauty of a work of art.

For questions 51 to 53:
The given information can be tabulated as shown below.

Name	Profession	City
Aman	-	-
Bharti	Manager	-
Charu	-	Mumbai
Dishank	-	-
Eric	-	-
Farhan	Professor	Mumbai
Gaurav	-	Delhi
Hitesh	Accountant	Delhi
Inder	Accountant	Kolkata
Jatin	Manager	Kolkata
Kamal	Manager	-
Lalit	Professor	Mumbai

It can be easily deduced that the number of different professionals working in each of the three cities is as given below.

	Kolkata	Mumbai	Delhi
Accountant	2	1	1
Manager	1	1	2
Professor	1	2	1

As three people who work in Mumbai are already known, Kamal and Dishank must be working in Delhi. As Jatin is a Manager working in Kolkata, Bharti must be working in Mumbai and Aman and Eric must be working in Kolkata. As Aman is not an Accountant, he must be a Professor and Eric must be an Accountant. Therefore, Charu also must be an Accountant. Hence, one of Gaurav and Dishank is a Manager and the other is a Professor. The final table can be shown as given below.

Name	Profession	City
Aman	Professor	Kolkata
Bharti	Manager	Mumbai
Charu	Accountant	Mumbai
Dishank	Manager/Professor	Delhi
Eric	Accountant	Kolkata
Farhan	Professor	Mumbai
Gaurav	Professor/Manager	Delhi
Hitesh	Accountant	Delhi
Inder	Accountant	Kolkata
Jatin	Manager	Kolkata
Kamal	Manager	Delhi
Lalit	Professor	Mumbai

51. c Charu is an Accountant working in Mumbai.

52. d Apart from Kamal, either Dishank or Gaurav could be the other Manager working in Delhi.

53. d Eric is an Accountant working in Kolkata.

54. c Let Santro, Wagon R, Zen, Ritz, Yuva, Innova, Corolla, Matiz, Xylo and Scorpio be represented by S, W, Z, R, Y, I, C, M, X and Sc respectively. The arrangement can be started by fixing the positions of Z and Sc at the extreme left of the two rows. X can be parked either to the immediate right of Z/Sc or in the middle of the row. If X is parked in the middle of the row, statement (iv) is violated. Further analysis leads to the following table:

Row I	Innova	Corolla	Wagon R	Matiz	Scorpio/ Zen
Row II	Zen/ Scorpio	Xylo	Ritz	Yuva	Santro

Therefore, the number of cars parked between Corolla and Matiz cannot be the same as the number of cars parked between Scorpio and Xylo.

For questions 55 and 56:
Let Saurabh, Yubraj, Vajendar, Gombzi and Ambata be represented by S, Y, V, G and A respectively. Let Delhi Devils and Kolkata Riders be represented by DD and KR respectively. From statement (ii), either 2^{nd}-3^{rd} players or 3^{rd}-4^{th} players were the two batsmen. Therefore, the player picked 3^{rd} was definitely a batsman and the players picked 1^{st} and 5^{th} were bowlers. From statement (iv), A and Y could be either 1^{st} and 4^{th} players or 2^{nd} and 5^{th} players, in no particular order. From statement (iii), Y could not be the player picked 1^{st} or 5^{th}.

55. a

Order of Selection	**1** Bowl	**2** Bat	**3** Bat	**4** Bowl	**5** Bowl
Player	A	V	S/G	Y	G/S
Team	-	DD	KR	KR	DD

Or

Order of Selection	**1** Bowl	**2** Bowl	**3** Bat	**4** Bat	**5** Bowl
Player	S/G	Y	G/S	V	A
Team	DD	KR	KR	DD	-

Hence, Yubraj was definitely not a batsman picked by Delhi Devils.

56. b If Saurabh was a bowler, then Gombzi was definitely a batsman picked 3^{rd}.

57. a Let heights of Ashu, Banu, Charu, Diya, Ellie and Fana be represented by A, B, C, D, E and F respectively.
The Science student mentioned should be Ashu only.
From the first statement, E > D > A and B > A.
From the second statement, C > A > F.
Therefore, Fana is the shortest among the six students.

For questions 58 to 60:
In one group the number of matches won by different players were 3, 2, 1 and 0. In the other group the number of matches won by different players were 2, 2, 1 and 1. For the two players who played the final, the number of matches won by them in Round-I could be either 3 or 2 and they must have won their respective matches in Round-II.
As Sonu lost exactly two matches in the tournament, he must have lost a match in Round-I and the final match. Thus it can be concluded that the number of matches won by Kishan, Karan and Arjun in Round-I was one each. As Ram and Kishan were in the same group in Round-I, Ram must have lost all his matches in Round-I and hence it can be concluded that Karan and Arjun were in the same group in Round-I. As Lakhan won more matches than Gopi, both of them were in the same group as Ram and Kishan. The conclusions can be tabulated as shown below:

Round-I:

Group I	Lakhan (3), Gopi (2), Kishan (1), Ram (0)
Group II	Sonu (2), Monu (2), Karan (1), Arjun (1)

Round-II:

Sonu - Lakhan/Monu	Gopi - Lakhan/Monu

Round-III:

Sonu - Gopi

58. b Gopi won the tournament.

59. d The difference between the numbers of matches won by Gopi and Monu respectively in the tournament was two.

60. b The total number of matches won by Lakhan in the tournament was 3.