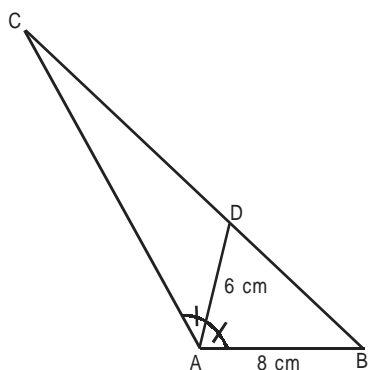


Proctored Mock CAT-9 2011

Answers and Explanations

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

1. a



$$\text{Area of triangle ABC} = \frac{1}{2} \times AB \times AC \times \sin \angle BAC$$

...(i)

$$\text{Area of triangle ABD} = \frac{1}{2} \times AB \times AD \times \sin \angle BAD$$

...(ii)

$$\text{Area of triangle ACD} = \frac{1}{2} \times AC \times AD \times \sin \angle CAD$$

...(iii)

$$\text{Also, } \angle BAD = \angle CAD = \frac{1}{2} \angle BAC = 60^\circ \text{ and}$$

$$(i) = (ii) + (iii)$$

Hence,

$$\frac{1}{2} \times 8 \times AC \times \frac{\sqrt{3}}{2} = \frac{1}{2} \times 8 \times 6 \times \frac{\sqrt{3}}{2} + \frac{1}{2} \times AC \times 6 \times \frac{\sqrt{3}}{2}$$

$$\Rightarrow AC = 24 \text{ cm}$$

2. a

We can say that there are 9 positions in the queue. Let us first select 3 positions for Ashish, his father and his grandfather. This can be done in 9C_3 ways. There is only one way in which these 3 people can occupy the 3 positions.

Now let us select 3 positions out of the remaining 6 for Bimal, his father and his grandfather. This can be done in 6C_3 ways.

Now we are left with just 3 positions which are to be occupied by Chatur, his father and his grandfather and again there is just one way of doing it.

Hence, the answer = ${}^9C_3 {}^6C_3$

3. d

The unit digit of every term from $5!$ to $49!$ is 0.

$$\text{Also, } 1! - 2! + 3! - 4! = 1 - 2 + 6 - 24 = -19.$$

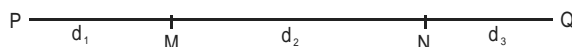
Hence, the unit digit of N will be $10 - 9 = 1$.

The unit digit of N^N will also be 1.

4. b

As their speeds are x and y such that $2x > y > x$, we can conclude that at the time of the first two meetings Ria and Tia must be running in opposite directions.

Let M and N be their first and second meeting points respectively. Let the total distance between points P and Q be ' d '.



I: When Ria and Tia meet for the first time, the distance covered by Ria = d_1 .

II: When Ria and Tia meet for the second time, the distance covered by Ria after the first meeting = $(d_2 + d_3 + d_3)$.

Since the time gap between the first two meetings should be double of the time taken for the first meeting, $2d_1 = d_2 + d_3 + d_3$.

$$\Rightarrow 420 = d_2 + 300 \text{ or } d_2 = 120 \text{ m.}$$

$$\Rightarrow d = d_1 + d_2 + d_3 = 480 \text{ m.}$$

5. a

Let the two curves intersect at (h, k) . Hence,

$$k = h^4 + 2h^3 + 4h - 8 = 2h^3 + 2h^2 + 4h$$

$$\Rightarrow h^4 - 2h^2 - 8 = 0$$

$$\Rightarrow h^2 = 4 \text{ or } -2$$

As $h^2 > 0$, we get $h = 2$ or -2 .

Hence, the two curves intersect only once for

$$0 \leq x \leq 5.$$

For questions 6 to 8:

The table given below shows:

(i) The number of matches lost and the number of matches won by each team in its home state.

(ii) The number of matches lost and the number of matches won by each team in states other than its home state.

(iii) The total points scored by each team.

Team	The number of matches played in its home state		The number of matches played in states other than its home state		Total Points
	Lost	Won	Lost	Won	
Atlanta Hawks	21	26	30	9	109
Boston Celtics	14	24	35	16	131
Chicago Bulls	6	32	27	16	139
Denver Nuggets	25	20	27	12	103
Indiana Pacers	16	28	27	10	113
LA Lakers	8	35	19	27	170

6. b

Chicago Bulls finished as first runner up in the tournament.

7. c Denver Nuggets lost the maximum number of matches in its home state among the six teams and finished with a total of 103 points in the tournament.

8. d The total number of matches played by Indiana Pacers = 81
The number of matches lost by Indiana Pacers away from its home state = 27

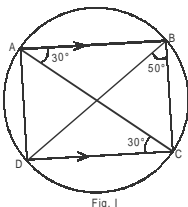
$$\text{Required percentage} = \frac{27}{81} \times 100 = 33.33\%$$

9. b $A = (k - 1)(k + 1)$
 $B = k(k + 2)$
For all values of k greater than or equal to 2, the natural numbers ' $k - 1$ ' and ' $k + 1$ ' are coprime with both ' k ' and ' $k + 2$ ' except when ' $k - 1$ ' and ' $k + 2$ ' are both multiples of 3.
Note that $(k + 2) - (k - 1) = 3$.
Here, the common factor of A and B , which is also a prime number, is 3.
E.g. when $k - 1 = 3$ or $k = 4$, $A = 15$ and $B = 24$.
The only common factor of A and B in this case is 3.

10. d Let the roots be α and 2α .
Sum of the roots = $\alpha + 2\alpha = 3\alpha = -b$... (i)
Product of the roots = $\alpha \times 2\alpha = 2\alpha^2 = 2b$... (ii)
Dividing equation (ii) by equation (i), we get
 $\alpha = -3$ and $b = 9$.
The equation whose roots are 9 and 10 is
 $x^2 - 19x + 90 = 0$.

11. c Amount of water initially in 1000 ml of $M_1 = 400$ ml
Amount of water initially in 1000 ml of $M_2 = 700$ ml
Amount of water left in M_1 when x ml is taken out = $(400 - 0.4x)$ ml
Amount of water left in M_2 when x ml is taken out = $(700 - 0.7x)$ ml
Amount of water in M_1 when x ml from M_2 is added = $400 - 0.4x + 0.7x = 400 + 0.3x$.
Amount of water in M_2 when x ml from M_1 is added = $700 - 0.7x + 0.4x = 700 - 0.3x$.
According to the information given in the question,
 $400 + 0.3x = 700 - 0.3x$ or $x = 500$.

12. d **From Statement A:**



As $AB \parallel CD$ and AC is the transversal,
 $\angle BAC = \angle ACD = 30^\circ$
(Alternate angles)

Thus this statement alone is sufficient to answer the question.

From Statement B:

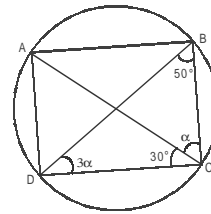


Fig. II

In $\triangle BCD$, we have

$$\angle BCD + \angle CDB + \angle DBC = 180^\circ$$

Let $\angle BCA$ be α , therefore, $\angle BDC = 3\alpha$

$$\Rightarrow 4\alpha + 80^\circ = 180^\circ$$

$$\Rightarrow \alpha = 25^\circ$$

Now, $\angle BAC = \angle CDB = 3\alpha = 75^\circ$

(Angles subtended by the same arc)

Thus this statement alone is sufficient to answer the question.

13. a In the first 200 natural numbers there are 20 numbers whose unit digit is '0', there are 11 numbers whose tens digit is '0' and there are 2 natural numbers which have both the unit and the tens digit as '0'. So in all there are $200 - (20 + 11 - 2) = 171$ such numbers which do not have '0' as any digit.

The 172nd, 181st, 190th and 199th term of the given sequence will be 211, 221, 231 and 241 respectively. So the 200th term will be 242.

14. a Volume of the cylinder = $\pi r^2 \left(\frac{H}{2} \right) = 2\pi r^3$

Volume of the frustum

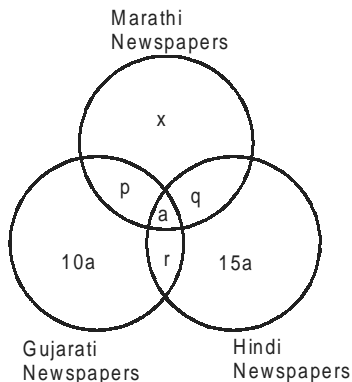
$$= \frac{1}{3} \pi R^2 H - \frac{1}{3} \pi r^2 \left(\frac{H}{2} \right) = \frac{16}{3} \pi r^3 - \frac{2}{3} \pi r^3 = \frac{14}{3} \pi r^3$$

$$\text{Volume of the hemisphere} = \frac{2}{3} \pi R^3 = \frac{16}{3} \pi r^3$$

$$\text{Volume of the toy} = \left(2 + \frac{14}{3} + \frac{16}{3} \right) \pi r^3 = 12\pi r^3$$

For questions 15 and 16:

The situation given in the question can be shown with the help of a Venn diagram.



Let p, q, and r be equal to $k - d$, k and $k + d$, not necessarily in the same order.

We have,

$$a + 15a + q + r = 70 \quad \dots(i)$$

$$a + p = 15 \quad \dots(ii)$$

$$a + r = 19 \quad \dots(iii)$$

Adding (i) and (ii), we get

$$17a + p + q + r = 85$$

$$17a + 3k = 85$$

The only possible values of 'a' and 'k' are 2 and 17.

Therefore, $p = 13$, $q = 21$ and $r = 17$.

As the number of families reading Hindi newspapers is more than those reading Marathi newspapers, the number of families reading only Marathi newspapers is either 10 or 25.

15. d The total number of families in the society is either 113 or 128.

16. c The number of families reading both Marathi and Hindi newspapers is 23.

17. c The total number of ways of distributing the bags, using the formula for distribution
 $= {}^{4+4-1}C_{4-1} = {}^7C_3 = 35$.

Let us find the number of ways of distribution in which no boy gets more than 2 bags.

(i) Each boy gets one bag:

The number of ways = 1

(ii) One boy does not get any bag, one boy gets two bags and two boys get one bag each:

The boy who does not get any bag can be selected in 4C_1 ways while the one who gets two bags can be selected in 3C_1 ways.

The number of ways = ${}^4C_1 \times {}^3C_1 = 12$

(iii) Two boys do not get any bag and two boys get two bags each:

The two boys who do not get any bag can be selected in 4C_2 ways.

The number of ways = ${}^4C_2 = 6$

The total number of ways = $1 + 12 + 6 = 19$

Hence, the answer = $\frac{19}{35}$.

18. d $\frac{r}{s^2} = \frac{p^2}{q}$

$$\Rightarrow qr = p^2 s^2$$

But as $-0.49 \leq r \leq -0.01$,

we must have $q \leq 0$ or $-0.25 \leq q \leq 0$.

$$s^2 = \frac{qr}{p^2}$$

Maximum possible value of $s^2 = \frac{(-0.25)(-0.49)}{4^2}$

Maximum and minimum possible values of s are 0.0875 and -0.0875 respectively.

Hence, the answer = $2 \times 0.0875 = 0.175$.

19. c Let the number of units of work completed by a man, a woman and a child in one day be M, W and C respectively.

Hence, $2M = 3C$ and $3M = 5W$.

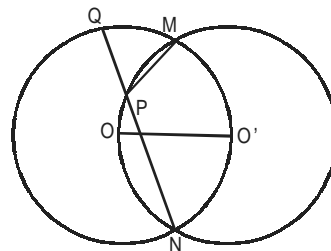
Let $M = 15U$. Hence, $C = 10U$ and $W = 9U$.

The amount of work completed by a man, a woman and a child together in 10 days = $10(15U + 10U + 9U) = 340U$.

The amount of work completed by 2 children in a day = $20U$.

Hence, the answer = $\frac{340}{20} = 17$ days.

20. b



$\triangle MOO' \cong \triangle NOO'$
 (Since all the sides are equal.)

$\therefore \angle MON = \angle MO'N = 120^\circ$

Minor arc MN subtends $\angle MON$ at the center

and $\angle MQN$ at circumference.

$$\therefore \angle MQN = 60^\circ \quad \dots (i)$$

(The angle subtended by an arc at the centre is twice the angle subtended by the arc at circumference.)

Now, in circle with center O' , major arc MN subtends

$\angle MON$ and $\angle MPN$ at circumference.

$$\therefore \angle MON = \angle MPN = 120^\circ$$

$$\Rightarrow \angle MPQ = 60^\circ \quad \dots (ii)$$

From equations (i) and (ii), $\triangle MPQ$ is an equilateral triangle.

$$\text{Hence, the required fraction} = \frac{\frac{\sqrt{3}}{4} \times 4^2}{\pi 6^2} = \frac{\sqrt{3}}{9\pi}.$$

21. c **From Statement A:**

The ratio of the speeds is given. With the help of this we can determine the respective distance covered by them till the moment they meet but cannot determine the time taken by them to meet.

Thus this statement alone is not sufficient to answer the question.

From Statement B:

No information regarding the speed of the faster car is given.

Thus this statement alone is not sufficient to answer the question.

From Statements A and B:

Let the speed (in km/hr) of the two cars be $3x$ and $7x$.

$$\therefore 3x \times 10 = 600 \Rightarrow x = 20$$

We can determine the speeds of the two cars and hence the time taken by them to meet.

22. d As the larger number is written on the left, the larger number is either 54 or 55.
Let the smaller number be x .

Case I: The larger number is 54.

$$5400 + x = 5481 + 54 - x$$

$$2x = 5535 - 5400 = 135$$

(In this case x will not be a natural number.)

Case II: The larger number is 55.

$$5500 + x = 5481 + 55 - x$$

$$2x = 5536 - 5500 = 36$$

$$\Rightarrow x = 18$$

Hence, the required sum = 73.

23. a **L.H.S.**

$$= x^3 + 3x^2 - 4x$$

$$= x(x^2 + 3x - 4)$$

$$= x(x - 1)(x + 4)$$

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

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

As the product of three consecutive integers is divisible by 3, the L.H.S. of the equation is always divisible by 3.

R.H.S.

$$= 81y^3 - 9y^2 + 6y - 1$$

The R.H.S. of the equation is not divisible by 3.

Hence, no solution is possible.

For questions 24 to 26: The table given below shows the value (in mn tonnes) of the Production (P) and the Requirement (R) of various commodities in Pecoslovakia from 2003 to 2006.

	2003		2004		2005		2006	
	P	R	P	R	P	R	P	R
Pulse	45	30	42	24	50	24	60	75
Jowar	50	70	54	60	36	48	40	45
Bajra	15	20	20	36	22	36	30	60
Rice	32	30	40	48	48	60	35	60
Wheat	40	50	48	72	60	72	50	60
Total	182	200	204	240	216	240	215	300

24. d 2006

25. a 2003

26. a 1

27. d $A = 28^{12} = 2^{24} \times 7^{12}$

$$B = 18^8 = 2^8 \times 3^{16}$$

$$C = 21^6 = 3^6 \times 7^6$$

The total number of factors of A will be $(24 + 1)(12 + 1) = 325$.

Similarly, the total number of factors of B and C will be 153 and 49 respectively.

Case I: Factors common to A, B and C.

HCF of (A, B and C) = 1.

The only factor common to A, B and C is 1.

Case II: Factors common to exactly two among A, B and C.

Factors common to A and B = $2^0, 2^1, \dots, 2^7, 2^8$

Factors common to B and C = $3^0, 3^1, \dots, 3^5, 3^6$

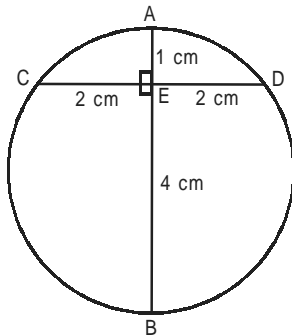
Factors common to A and C = $7^0, 7^1, \dots, 7^5, 7^6$

Hence, the answer

$$= (325 + 153 + 49) - (9 + 7 + 7) + 1 = 505.$$

28. d Let the volume filled (in units) by an inlet pipe in an hour = V .
The total volume (in units) of the tank = $30V$.
Let the volume emptied (in units) by an outlet pipe in an hour = U .
Hence, $10(5V - 4U) = 30V$ or $V = 2U$.
The time taken by an outlet pipe to empty $15V$ volume
$$= \frac{15V}{U} = 30 \text{ hours.}$$

29. b $AE \times BE = CE \times DE$.
Hence, $AE = 1 \text{ cm}$.
The perpendicular bisector of any chord of a circle must pass through its centre.



Hence, AB also passes through the centre of the circle and is the diameter of the circle.
 $AB = AE + BE = 1 + 4 = 5 \text{ cm}$.
Circumference of the circle = $5\pi \text{ cm}$.

30. b **Case I:**
2 boys and 1 girl is selected in the team.
The number of ways = ${}^4C_2 {}^6C_1$
- Case II:**
1 boy and 2 girls are selected in the team.
The number of ways = ${}^6C_2 {}^4C_1$
- The total number of ways = ${}^4C_2 {}^6C_1 + {}^6C_2 {}^4C_1 = 96$
$$= \frac{{}^4C_1 {}^6C_1 {}^8C_1}{2}$$
31. d The passage highlights the various aspects to following a spiritual path. The author also provides characteristics of different kinds of spiritualists – the spiritual interlocutor, the creative and the one with compassion. It can thus also be inferred that the author is speaking about different spiritual types. Option (d) is the answer and implies a plural context too. Option (a) is incorrect as this forms only a part of the passage. The author does not discuss the limitations of the intellectual, though he does refer to the boundaries of the mind. This renders option (b) incorrect. Option (c)

can be ruled out as this is not the main idea but only an example given to substantiate the main idea.

32. c One should not try to solve this question merely on the basis of the meanings of the words given in the passage as the answer is expected to convey the correct semantics intended by original text.

The answer can be found in the second paragraph. The selected line refers to detachment that has been spoken of in the previous sentence. Experience is not the reference point for the selected line. Options (a) and (d) can thus be ruled out. The use of the conjunction “but” indicates dissimilarities between the first and second halves of the sentence. Pain is linked with obfuscation and compassion with hypocrisy. While paraphrasing, ‘obfuscation’ would not convey the meaning of disguise. Option (b) is incorrect as it brings in disguise (which does not help prevent pain). Option (c) correctly paraphrases to say that detachment does not prevent pain but rejects complication (which can give rise to pain) and it does not prevent compassion but rejects pretense (which can prevent compassion).

33. b Every paragraph in the passage has a line that provides advice on what the government should do with reference to tax reforms. The tone of the author is advisory. Option (a) is ruled out, as the author is not trying to calm or appease the audience. Option (c) is incorrect as the author does not predict about the issue dealt in the passage. Option (d) can be ruled out because the author is not trying to criticize the government; instead he is providing possible solutions and advice.
34. a The last lines of the third paragraph state that, “Right now, wealthier taxpayers get the greatest benefit. The process needs to be reformed so that most of the help flows to those who most need it: low- and middle-income taxpayers.” This implies option (a). Option (b) goes against the information in the passage. Option (c) is incorrect as the author states that the current tax break gives the greatest benefit to wealthier taxpayers. This cannot be generalized for all tax breaks. Option (d) is incorrect as it goes against the information in the passage.

35. d The fifth paragraph of the passage states that more revenues are needed and these can be obtained from other forms of taxation or through tax increases. However, the last line of the passage also states that, “Until tax increases are considered in equal measure to spending cuts, there will be no budget fix.” This line implies that equal importance must be given to both tax increases and spending cuts and not only to either one. This rules out options (b) and (c). Option (a) can be ruled out, as there is no implication in the passage towards this assertion. Option (d) best sums up the inference from the last sentence of the passage.

36. c **From Statement A:**
The statement alone is clearly not sufficient to answer the question.

From Statement B:

The statement alone is clearly not sufficient to answer the question.

From Statements A and B:

Left to Right – Language in the first to the last slot				
English/ Malayalam	Malayalam/ English	Telugu	Hindi	Tamil

37. b AEDBC
BC forms a logical link as C comments on certain actions that have been taken and calls them symptoms of a weak and failing culture. Statement A states an action. However, AC is not a logical flow, as C is a comment on the entire situation and works well as an ending sentence. DB is also a link as D gives the reason and B the result/action taken. The link thus is DBC. Statement E can be confused for an ending sentence, however, it will provide a disjoint ending. It fits in best after A as it comments on the 'action of censorship' mentioned in A. Also ED is linked as D starts the explanation on why censorship is bad.
38. a ABCDE
The question can be solved by options. Sentence A starts the discussion. Sentence D mentions the word 'these revenues' and only C presents a logical source of revenue making CD a mandatory pair. This leads to option (a).
39. c CDAEB
There is a link between DA – the noun-pronoun link. Options (a) and (d) can be ruled out based on this. Also there is a link between C and D as the latter specifies the chief beneficiary. This helps us to establish the CDA link. 'Militia' means a group of people who are not professional soldiers but who have had military training and can act as an army. The pronoun 'they' in E refers to Gen. Bosco Ntaganda and his Tutsi militia. Thus, AE is a mandatory pair. Sentence B is best suited as a closing sentence. Hence, option (c) is the correct option.

For questions 40 to 42:

Let us try to write the possible arrangements of the bus stops by writing them in a row (left to right means first to last).
From statements (i) and (iii) we can say that Q was exactly in the middle of P and T and the order of the three was 'T Q P'.

Case I: There were two bus stops between T and Q.
T _ _ Q _ _ P

This violates statement (i) which states that the bus reached S from P.

Case II: There was exactly one bus stop between T and Q.

(a) T _ Q _ P _ _

Only one arrangement is possible:

T U Q V P S R

(b) _ T _ Q _ P _

This violates statements (i) and (iv) combined.

(c) _ _ T _ Q _ P

This violates statement (i) which states that the bus reached S from P.

Case III: There was no bus stop between T and Q.

(a) T Q P _ _ _ _

Two arrangements are possible:

T Q P S U V R and

T Q P U S R V

(b) _ T Q P _ _ _ and (c) _ _ T Q P _ _

These violate statement (iv) and statement (ii) respectively.

(d) _ _ _ T Q P _ and (e) _ _ _ _ T Q P

These violate statements (i) and (ii) combined.

The only possible arrangements are:

I: T U Q V P S R

II: T Q P S U V R

III: T Q P U S R V

40. a T was definitely the first bus stop among the seven.
41. d The last bus stop among the seven was either R or V.
42. b The time taken by the bus to travel from P to S and from T to Q was the same. But the average speed of the bus was different in the two cases. Hence, the distance between P and S was not the same as that between T and Q. This is followed by arrangements I and III. For both the arrangements the bus stop immediately before R was S.
43. a The paragraph is about Reagan's decision to move backwards in terms of economic and social welfare. It is about the class warfare between the rich and the working class. The author states that Reagan's gamble paid off – the last line makes a reference to the factors that supported this gamble. The best answer would be one that concludes the passage with a reference to the gamble that was made. Option (a) does this. Option (b) is incorrect, as the scope of discussion on the country is not defined. Moreover, it begins the discussion on a new topic and should start with a new paragraph.
44. c The paragraph is in the first person and so the last sentence should not be in the second or third person. This rules out options (b) and (d). Both the options do not deal with the theme of the passage. The last sentence also states what was required to maintain the American dream and the word 'that' in option (c)

refers to it. Moreover, the paragraph has a negative tone and starts by pointing to a mistake. Thus it is logical for the last sentence too to end on a negative note. Option (c) is the correct answer. Option (a) can be ruled out because it violates the scope of the passage.

45. b As Chitta is immediately behind Farrar, Chitta must be the last person in the queue. As Bukka is immediately in front of Ganesh and Ganesh is not immediately in front of Farrar, we get two possible cases.

Case I:

Left to Right – Persons from first to last in the queue						
	Bukka	Ganesh			Farrar	Chitta

Since Aadi is immediately in front of neither Bukka nor Farrar and Ganesh is not immediately in front of Aadi, this case is not possible.

Case II:

Left to Right – Persons from first to last in the queue						
Aadi	Devan/ Emaan	Bukka	Ganesh	Emaan/ Devan	Farrar	Chitta

Hence, Bukka is the third person from the front in the queue.

46. c The passage talks about shifting of the view from top (politicians and officials) to down (man and woman in the streets). Option (c) reflects this. Option (a) is irrelevant as it fails to address the issue. Option (b) is incorrect as it's incomplete in providing the idea by talking about a mere inclusion of opinions of the common man. Option (d) talks about multiplicity whereas democratization focuses mainly on common man.
47. b Options (a) and (c) have been mentioned in the first paragraph and are negated. Refer to the lines "Above all, I think, I wanted to challenge the lazy convention by which we see ordinary Germans at that time as a homogenized mass of Nazis, like robots, all marching in goosestep. Despite its popularity, that was never a terribly realistic assumption for any historian to make. I wanted to bring out the multiplicity of opinions and voices that were available in wartime Berlin." The author does not try to challenge the understanding about Germans in general. He only talks about the perception about Germans during the wartime. He tries to challenge the opinion about Germans in wartime Berlin (and has specifically mentioned *that period*) and has considered it as a factor. But option (b) presents a generalization which is beyond the scope of the passage and cannot be inferred as a factor the author took into account to write the book.
48. c The author starts by talking about how, after having researched the historiography of Berlin, he identified

some gaps in knowledge that he could work in. He goes on to discuss his intention of bringing out the multiplicity of opinions and voices that were present in wartime Berlin. The author then discusses the original research that has gone into the book and talks about his research procedures and challenges. Hence, option (c) is the most appropriate choice.

49. a 'Pull a fast one' is the correct idiom and it means to trick somebody. Thus sentence (a) is incorrect. 'Pull over' (of a vehicle or its driver) means to move to the side of the road in order to stop or let something pass. Thus, sentence (b) is correct. 'Pull away' in context of a vehicle means to start moving. Thus, sentence (c) is correct. 'Pull strings' means to exert hidden influence or control. Thus, sentence (d) is correct.
50. a The sentence (a) should be 'We closed with' and not 'We closed on with'. 'Closed with' means to engage in a struggle at close quarters; grapple <close with the enemy>. Thus sentence (a) is incorrect. 'Closed the distance' means to finish or end the distance. Thus, sentence (b) is correct. 'Close to' means comparable or near in space or time. Thus, sentence (c) is correct. If a group of people close ranks, they work closely together to defend themselves, especially when they are being criticized. Similarly, if soldiers close ranks, they move closer together in order to defend themselves. Thus, sentence (d) is correct.

For questions 51 and 52:

The given information can be tabulated as shown below.

Left to Right (Increasing order of height/weight)				
Height	Sahadev	Arjun	Bheem	Nakul
Weight	Bheem	Arjun	Nakul	Sahadev

51. a Bheem
52. c Sahadev
53. c In the given sentence, the author tries to put forward his/her opinion about morality. According to the author, it is mandatory that the norms of morality apply equally to everyone. So, the only word that can describe the author's opinion on moral relativism is 'oxymoron'. An *oxymoron* means a phrase that combines two words that seem to be the opposite of each other, for example a *deafening silence*. In context of the given sentence, 'legitimacy' and 'oxymoron' are apt words for the first and the second blank respectively.
54. d The clue words are 'the supporters roared back'. It means that something was said against Mr. Hazare which made his supporters angry and they roared back with a positive statement. Both 'supplanting'

which means to take the place of somebody/something (especially somebody/something older or less modern) and 'usurping' which means to take somebody's position and/or power without having the right to do this are appropriate for the first blank. 'Embezzling' which means to steal money that you are responsible for or that belongs to your employer is out of context of the given sentence and 'emulating' is rejected as it has a positive connotation. Thus, options (b) and (c) are negated. 'Warp' which means to cause to judge, choose, or act wrongly or abnormally; to influence somebody so that they begin to behave in an unacceptable or shocking way goes against the theme and context. 'Purge' means to make somebody/something pure, healthy or clean by getting rid of bad thoughts or feelings and matches well with the context of purging India of corruption. Hence, 'usurping' is apt for the first blank and 'purge' is apt for the second.

55. a AAAAA

'Deign' means to do something in a way that shows you think you are too important to do it. 'Doyne' means the most respected or most experienced member of a group or profession. So, 'deign' is correct for the first sentence. 'Disbar' means to stop a lawyer from working in the legal profession, especially because he or she has done something illegal whereas 'debar' means to officially prevent somebody from doing something, joining something, etc. So the word 'disbar' is more appropriate in the context of a lawyer. 'Commensurate' means matching something in size, importance, quality, whereas 'commiserate' means to show somebody sympathy when they are upset or disappointed about something. So 'commensurate' is the apt word for the given sentence. 'Sextant' refers to an instrument for measuring angles and distances, used to calculate the exact position of a ship or an aircraft whereas 'sexton' refers to a person whose job is to take care of a church and its surroundings, ring the church bell, etc. 'Depravation' means moral corruption whereas 'deprivation' refers to the state of not having something that you need, like enough food, money or a home. Thus, in the context of character, 'depravation' is more suitable than 'deprivation'.

56. c BAABA

'Caddie' refers to a person who helps a player by carrying his or her clubs and equipment during a game (golf). A tea caddy refers to small box with a lid that you keep tea in (tea pot). 'Cane' somebody means to hit a child with a cane as a punishment. 'Cain' refers to the brother of Abel (in the Bible); a murderer. 'Gauntlet' refers to a strong glove with a wide covering for the wrist, used for example when driving. *Run the gauntlet* means to be criticized or attacked by a lot of people, especially a group of people that you have to walk through. 'Gaunttest' is the superlative form of gaunt and means very thin, usually because of illness, not having enough food, or worry. 'Serif' refers to a short line at the top or bottom of some styles of printed

letters. 'Seraph' refers to an angel of the highest rank. So, 'seraph' is apt for the fourth sentence. 'Saloon' refers to a car with four doors and a boot/trunk (space at the back for carrying things) which is separated from the part where the driver and passengers sit. It also refers to a large comfortable room on a ship, used by the passengers to sit and relax in. 'Salon' on the other hand refers to a shop/store that gives customers hair or beauty treatment or that sells expensive clothes.

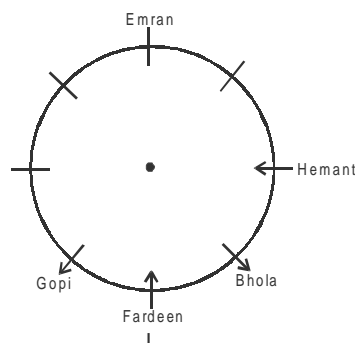
57. b The paragraph discusses mental healthcare as a lifelong journey and ends by speaking about the fact that it is complicated. Option (b) puts the complicated nature of mental healthcare into perspective. Option (a) is incorrect as it brings about the success of a particular person, whereas the author refrains from giving his opinion about the idea and merely states that the idea is disputable. So option (a) does not fall in line with the opinion of the author and appears to be too abrupt. Option (c) is incorrect as it deviates from the central idea – there is no mention of the risk involved in revealing one's stories. Option (d) is also incorrect as it brings in the limits of traditional medicine, which is not within the scope of the paragraph.

For questions 58 to 60:

Let Ashish, Bhola, Coral, Deva, Emran, Fardeen, Gopi and Hemant be represented by A, B, C, D, E, F, G and H respectively. We can start arranging by fixing the position of F using statement (iii). This gives us two possible cases.

Case I: F is facing the center.

From statement (iii), as H is sitting immediately to the left of B, B must be facing away from the center. From statement (ii), as E is sitting two places to the right of H, H must be facing the center and hence G, who is sitting three places to the left of E, must be facing away from the center. The conclusions made thus far can be shown in the figure given below.

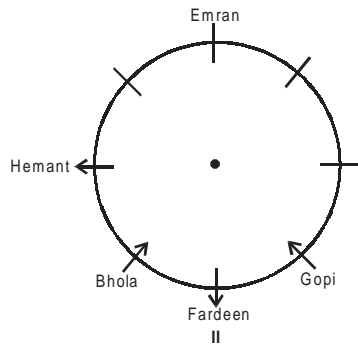


(Arrows indicate the direction in which the person is facing.)

From here we can conclude that G, who is sitting two places to the right of Bhola, is facing away from the center.

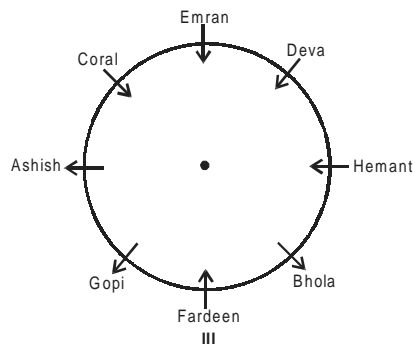
Case II: F is facing away from the center.

From statement (iii), as H is sitting immediately to the left of B, B must be facing the center. From statement (ii), as E is sitting two places to the right of H, H must be facing away from the center and hence G, who is sitting three places to the left of E, must be facing the center. In this case statement (iv) is violated. The conclusions made thus far can be shown in the figure given below:



(Arrows indicate the direction in which the person is facing.)

Further analysis (following Case I) leads to the final arrangement given below.



58. a North-West

59. c North

60. b 90°