Answer Key XAT 2009

1	D	**21**	A	**41**	B	**61**	C	**81**	A	**101**	A
2	C	**22**	D	**42**	C	**62**	E	**82**	A	**102**	D
3	E	**23**	E	**43**	A	**63**	A	**83**	E	**103**	D
4	–	**24**	E	**44**	D	**64**	C	**84**	E	**104**	E
5	C	**25**	D	**45**	A	**65**	A	**85**	D		
6	A	**26**	C	**46**	D	**66**	A	**86**	D		
7	E	**27**	A	**47**	E	**67**	E	**87**	E		
8	–	**28**	C	**48**	A	**68**	D	**88**	E		
9	B	**29**	D	**49**	A	**69**	B	**89**	D		
10	B	**30**	B	**50**	A	**70**	C	**90**	C		
11	B	**31**	D	**51**	C	**71**	B	**91**	A		
12	E	**32**	A	**52**	E	**72**	E	**92**	B,D		
13	C	**33**	B	**53**	A	**73**	A	**93**	E		
14	E	**34**	B	**54**	B	**74**	D	**94**	E		
15	B	**35**	D	**55**	A	**75**	A	**95**	D		
16	E	**36**	C	**56**	B	**76**	B	**96**	A		
17	D	**37**	C	**57**	A	**77**	E	**97**	B		
18	D	**38**	C	**58**	C	**78**	B	**98**	A		
19	C	**39**	B	**59**	B	**79**	E	**99**	C		
20	A	**40**	D	**60**	B	**80**	B	**100**	D		

Solutions XAT 2009

SECTION A: DATA INTERPRETATION AND QUANTITATIVE ABILITY

1. D **From statement I:** This statement is alone sufficient to answer as the sales amount without advertising is given.
From statement II: This statement is alone sufficient since at particular sales revenue of Rs.2,90,000 advertisement expenditure of Rs.15,000 is given.
We can solve the questions individually from both the statements.

2. C Let the length of Bombay mail and Subarnarekha bridge be L_B and b respectively and speed (in km/hr) of Bombay mail be Sp_B.
From statement I: As Bombay mail runs at 60 km/hr and crosses the bridge in 30 seconds.

$$\Rightarrow \frac{L_B + b}{60} = \frac{30}{3600} \Rightarrow L_B + b = 0.5\,km$$

From statement II: As Bombay mail is running at 90 km/hr and crosses a lamp post in 10 seconds.

$$\Rightarrow \frac{L_B}{Sp_B} = \frac{10}{3600}$$

$\Rightarrow L_B = 0.25$ km
Combining Statements I and II
b = 0.25 km
As length of Geetanjali express 0.25 km, Geetanjali express cover 500 m in 30 seconds

$$\text{Required speed} = \frac{500}{30} = \frac{50}{3} m/s.$$

3. E Co-ordinates of points after halving their abscissas and doubling their ordinates infinite times:
A (0, High)
B (0, 0)
C (0, High)
D (0, High)
E (0, High)
Now the closest point would be the points which had the value of their ordinates closest at the beginning. Hence, the points A and C should be closest.

For questions 4 to 6:

Year	Leftover Cakes / Pastries / Gateaux (value in Rs. Lacs)	Increment / Decrement from previous year	Year	Leftover Savouries (value in Rs. Lacs)	Increment / Decrement from previous year	Year	Net Profit
1993	1.24		**1993**	3.92		**1993**	-3.03
1994	2.71	1.47	**1994**	8.56	4.64	**1994**	-6.28
1995	4.68	1.97	**1995**	14.81	6.24	**1995**	-14.77
1996	7.28	2.6	**1996**	23.09	8.28	**1996**	-9.42
1997	13.74	6.46	**1997**	43.52	20.43	**1997**	-40.92
1998	16.3	2.55	**1998**	51.71	8.19	**1998**	-56.65
1999	11.65	-4.65	**1999**	36.88	-14.83	**1999**	-30.47
2000	11.28	-0.37	**2000**	35.77	-1.1	**2000**	-30.62
2001	13.06	1.77	**2001**	41.39	5.62	**2001**	-3.86
2002	15.58	2.52	**2002**	49.19	7.81	**2002**	13.44
2003	19.4	3.82	**2003**	61.4	12.21	**2003**	24.68
2004	34.06	14.66	**2004**	66.01	4.61	**2004**	14.94

4. As from the calculations illustrated in table given above, all the statements 1, 2, 3 and 4 are true.
No options matching with the actual answer.

5. C From the table, in the year 1999 the decrease is the highest (4.65 lacs).

6. A The cake chain was in loses in 1993, 1997, 1998 and 2000.

7. E Let the number of wrong answers be x, so number of right answers is (30 – x).

Hence, $(30-x)-\left(\frac{x}{4}\right)=13.75$

$\Rightarrow$ x = 13.

So the number of incorrect answers is 13.

8. As the probability of both the teams (Arrogant and Overconfident) winning simultaneously is zero.

$\therefore P(A \cap O) = 0 \Rightarrow P(A \cup B) = P(A) + P(B$

$\Rightarrow P(A \cup B) = P(A) + P(B) = \frac{5}{8} + \frac{1}{5} = \frac{33}{40}$

So required odds will be 33 to 7

None of the given options is matching with the correct answer.

9. B Given that:

$F\left(\frac{x}{x-1}\right)=\frac{1}{x}$

Now for $0 < \alpha < 90°$, $F((\text{cosec}^2\,\alpha))$, putting

$\frac{x}{x-1} = \text{cosec}^2\alpha \Rightarrow x = \frac{1}{1-\sin^2\alpha} \Rightarrow \frac{1}{x} = \cos^2\alpha$

Hence, for $F(\text{cosec}^2\,\alpha) = \cos^2\alpha$.

Alternative method:

Given that $F\left(\frac{x}{x-1}\right)=\frac{1}{x}$, where $x \neq 0, 1$

$F(2)=\frac{1}{2}, F\left(\frac{3}{2}\right)=\frac{1}{3}, F\left(\frac{4}{3}\right)=\frac{1}{4}$

$F\left(\frac{3}{2}\right)=F\left(1+\frac{1}{2}\right)=\frac{1}{3}$

$F\left(\frac{4}{3}\right)=F\left(1+\frac{1}{3}\right)=\frac{1}{4}$

$\therefore F\left(1+\frac{1}{x}\right)=\frac{1}{x+1}$

$\text{cosec}^2\alpha = \frac{1}{\sin^2\alpha} = \frac{\cos^2\alpha + \sin^2\alpha}{\sin^2\alpha} = 1 + \cot^2\alpha$

$\left(\because \sin^2\alpha + \cos^2\alpha = 1\right)$

$F\left(\text{cosec}^2\alpha\right) = F\left(1+\frac{1}{\tan^2\alpha}\right) = \frac{1}{\tan^2\alpha + 1}$

$= \frac{1}{\sec^2\alpha} = \cos^2\alpha \qquad \left(\because \sec^2\alpha - \tan^2\alpha = 1\right)$

10. B In case of compounded annually, let P be the initial investment in plan A.

$A_1 = P\left(1+\frac{10}{100}\right)^n = P(1.1)^n \qquad \ldots(i)$

In case of simple interest in plan B

$A_2 = P + \frac{P \times 12 \times 12}{100} = P + P \times n \times 0.12$

$= P(1 + n \times 0.12) \qquad \ldots(ii)$

Checking at different values of n = 1, 2, 3, 4, 5, A_1 becomes greater than A_2 when n = 5.

Hence, upto 4 years, plan B is better than plan A.

11. B Let the cost price of 1 cotton trouser and 1 woollen trouser be 'C' and 'W' respectively.

Case I: Number of woollen trousers sold is 100% more than cotton trousers

$\therefore$ 1.3C + 1.5 × 2 × W = 1.45 (C + 2W)

$\Rightarrow$ 0.15C = 0.1W

$\Rightarrow$ 3C = 2W

Case II: Number of cotton trousers sold is 50% more than woollen trousers

S.P. = $1.3C + \frac{1.5 \times 2W}{3}$

or, S.P. = 1.3C + W = 2.8C

C.P. = $C + \frac{2}{3}W = 2C$

$\text{Profit} = \left(\frac{2.8C - 2C}{2C}\right) \times 100 = 40\%.$

12. E As per the question, let D be the total distance and 't' is the time taken. So we have

D = 10 t = 15(t – 0.5)

$\Rightarrow$ t = 1.5 hrs

$\Rightarrow$ D = 15 km

Now, for the given condition we have

$15 = S\left(t - \frac{3}{4}\right)$, where 'S' is the required speed.

$= S\left(\frac{3}{2} - \frac{3}{4}\right)$

$\Rightarrow$ S = 20 km/hour.

13. C Option (C) is the correct choice. Since producer's margin for fish spring roll is $\frac{2}{12} \times 100 = 16.6\%$ is more than the retailer margin which is $\frac{2}{14} \times 100 = 14.28\%$.

14. E Clear from the given graph.

For questions 15 and 16:

Given that PQR = XYZ = QAY

Let each of the above term be K.

So, we have PQR = XYZ = QAY = K $\Rightarrow PQ^2RXY^2ZA = K^3$

Now none of the letters in the L.H.S. of above equation can be 5, 7 and 0.

Therefore, $(PRXZA)Q^2Y^2 = K^3$

$\Rightarrow \left(2^7 \times 3^4\right) \times Q \times Y = K^3$

For L.H.S. to be perfect cube either of Q or Y has to be 2^2 or 3^2, which makes K = 72

Now 72 = QAY = (QY) A = 36A

$\therefore$ A = 2

Digits, which are not used, are 0, 5 and 7. Their sum is 12.

Hence we have the answers of question 15 as B and question 16 as E.

15. B

16. E

17. D Given that $F(x) = (x+2)(x+1)(x-1)(x-2)$

Putting x = P, we have

$F(P) = (P+2)(P+1)(P-1)(P-2)$

Now P is in the form $6K \pm 1$ where K is a positive integer.

$F(6K+1) = (6K+3)(6K+2)(6K)(6K-1)$

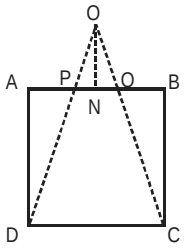
$= (36)(2K+1)(3K+1)(K)(6K-1)$ …(i)

$F(6K-1) = (6K+1)(6K+2)(6K)(6K-3)$

$= 36(6K+1)(3K+1)(K)(3K-1)$ …(ii)

Please note that the value of $K \geq 17$ and expression F (6K + 1) and F (6K – 1) always bear the factor 10.
Hence, 360 is the correct choice.

18. D



Let N be the foot of altitude dropped from O in ΔOPQ.

Area of trapezoid $PQCD = \frac{1}{2}(QP + DC) \times 10$

$\Rightarrow 80 = \frac{1}{2}(QP + 10)10$

$\Rightarrow$ QP = 16 – 10 = 6 units.

ΔOPQ and ΔODC are similar triangles and also let ON be x.

Therefore, $\frac{x}{x+10} = \frac{PQ}{DC}$

$\Rightarrow \frac{x}{x+10} = \frac{6}{10}$

$\Rightarrow$ x = 15 units.

19. C Possible sides of different triangles can be as follows: (2, 3, 4), (2, 4, 5), (2, 5, 6), (3, 4, 5) and (3, 4, 6)

20. A Given that $x^2 + 3x - 1 = 0$ and

$P_n = a^n + b^n$ for $n \geq 0$

Now, $a^n + b^n = (a^{n-1} + b^{n-1})(a+b) - ab(a^{n-2} + b^{n-2})$

$= -3(a^{n-1} + b^{n-1}) + (a^{n-2} + b^{n-2})$

$= -3P_{n-1} + P_{n-2}$

Alternative method:
Given that a and b are the roots of the equation
$x^2 + 3x - 1 = 0$. Also given that $P_n = a^n + b^n$ for $n \geq 0$
Now a + b = – 3 and ab = – 1
$P_2 = a^2 + b^2$, $P_1 = a + b$
$\Rightarrow a^2 + b^2 = (a+b)^2 - 2ab = 9 + 2 = 11$
Option (A) : $P_2 = -3P_1 + P_0 = -3(a+b) + 2 = 11$
Option (B): $P_2 = 3P_1 - P_0 = 3(a+b) - 2 = -11$
Option (C) : $P_2 = -P_1 + 3P_0 = -(a+b) + 6 = 9$
Option (D) : $P_2 = P_1 + 3P_0 = (a+b) + 6 = 3$
Option (A) is equal to 11.

21. A Let the break even point be attained on the sale of 'x' units.
Therefore, 40,00,000 + 100x = 200x
Or, x = 40000
So the total sales = 40000 × 200 = Rs. 80 lakh.

22. D Total cost when 1 lakh units were sold when the variable cost has increased by 10% = 40 lakh + 110 lakh = Rs.150 lakh
Initial Profit at normal variable cost = 200 lakh – 140 lakh = Rs.60 lakh
New Profit = Rs.200 lakh – Rs.150 lakh = Rs.50 lakh
Therefore, percentage decrease in the profit

$= \left(\frac{10}{60}\right) \times 100 = 16.67\%$.

23. E Initial profit = (200 lakh – 140 lakh) = Rs.60 lakh
Interest paid = 10% of 20 lakh = Rs.2 lakh
Profit after interest and taxes 70% of (60 – 2) lakh = Rs.40.6 lakh
After 20% growth in sales, he will now sell 1.2 lakh units
New profit = (200 × 1.02) – (40 + 100 × 1.2) = Rs.80 lakh
Interest paid = 10% of 20 lakh = Rs.2 lakh
Profit after interest and taxes = 70% of (80 – 2) lakh = Rs.54.6 lakh

Required percentage change = $\frac{54.6 - 40.6}{40.6} \times 100 = 34.5\%$.

24. E Let the four digit number be 'aaab' or 'baaa'
Since the number has to be a multiple of 9, therefore, 3a + b should be either 9, 18 or 27.

Case I: 3a + b = 9
Possible cases are: (1116, 6111, 2223, 3222, 3330, 9000)

Case II: 3a + b = 18
Possible cases are: (3339, 9333, 4446, 6444, 5553, 3555, 6660)

Case III: 3a + b = 27
Possible cases are: (6669, 9666, 8883, 3888, 7776, 6777, 9990)

Hence, total number of cases is 20.

25. D Let 5 additional ingredients Onion, Tomato, Carrot, Chilli Sauce and Tomato Sauce are denoted by O, T, C, CS, TS respectively.

Case I: Egg Roll:
Without any restriction the number of ways 'Egg Roll' can be Ordered = 2 × 2 × 2 × 2 × 2 = 32 ways (As each of the five additional ingredients can be selected or rejected i.e. 2 ways)
The cases are: (standard 'Egg Roll'), (O), (T), (C), (CS), (TS), (O, T), (O, C) …, (O, T, C, CS, TS)
Out of these cases the following four cases are not possible by the condition (b) as given in the question
(CS) (CS, TS) (CS, C) (CS, C, TS)
$\Rightarrow$ Total number of ways Egg Roll can be ordered
= 32 – 4 = 28.

Case II: Mutton Roll:
Total number of cases for Mutton roll must be half of the total numbers of cases for Egg Roll as mutton roll will never have the ingredient TS.

$\Rightarrow$Total cases for Mutton Roll = $\frac{28}{2} = 14$

$\Rightarrow$ Required number of cases
= 28 + 14 = 42.

26. C Let, there be a total of 'x' members in the group.
Therefore, the income for Raj Travels
$= (200 + x)(20000 - 50x) = 4000000 + 10000x - 50x^2$
For maximum value of 'I', the value of 'x' should be equal to 100.
Therefore, the maximum value of I will be Rs. 4500000.

27. A The important constraint here is that in the party, no member of AXIAL had interacted with more than three members of BELIANCE.

Given that there are 8 members of company AXIAL and three members of company BELIANCE interacted with four members of AXIAL.

Therefore, the maximum possible number of members of company BELIANCE in the party will be $3 + {}^4C_2$ (Since each of the remaining members of the company BELIANCE have interacted with two members of AXIAL) = 9.

28. C Given that the total global production of soda ash in 2008 was 40 MT.
Total production of soda ash by Tata Chemicals
= 3.2 + 2.2 = 5.4 MT

Market share of Tata Chemicals = $\left(\frac{5.4}{40}\right) \times 100 = 13.5\%$

Since the highest producer of soda ash globally was Solvay, therefore, its percentage share has to be greater than 13.5%.
Also, the share of FMC has to be less than the share of Tata Chemicals.
Hence, statements (2) and (4) are right.

29. D No information is provided about the total global production of soda ash in 2008.

30. B The production of Natural Soda Ash increased to 3.2 MT from 0.
Hence, the statement given in option (B) could be one of the possible reasons.

31. D There was no change in Tata Chemicals Synthetic Soda Ash production from 2007 to 2008.

32. A Proportion of soda ash to synthetic soda has decreased from 2001 to 2006 globally as the quantity of soda ash has remained the same whereas the quantity of synthetic ash has increased from 2002 to 2006.
Hence, statement (1) is correct.
Proportion of synthetic soda ash to total soda ash for TATA Chemicals in 2005 is 1 and that in 2007 is less than 1.
Hence, statement (3) is correct.

33. B As each child appears for four times in the given ten pairs,

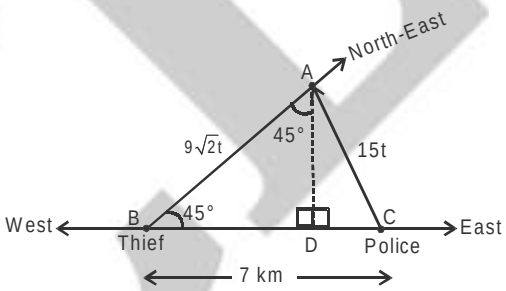
Sum of the weights of the five children = $\frac{408}{4} = 102$

Let weight of the lightest child and that of hevaiest child be 'x' and 'y'.
Then the weight of the second lightest child = 35 – x
The weight of the third lightest child = 36 – x
The weight of the second heaviest child = 47 – y
$\Rightarrow (x + 35 - x + 36 - x + y + 47 - y) = 102$
$\Rightarrow x = 16.$

Alternate method:
Let five different ages are a, b, c, d, e, such that
a < b< c < d < e
The ten different pairs are:
a + b, a + c, a + d, a + e, b + c, b + d, b + e, c + d, c + e, d + e
The sum of all 10 combinations are:-
4(a + b + c + d + e) = 35 + 36 + 37 + 39 + 40 + 41 + 42 + 45 + 46 + 47 = 408
$\Rightarrow$ a + b + c + d + e = 102
The sum of two Smallest weight = a + b = 35
The sum of two Largest weight = d + e = 47
Therefore, 35 + c + 47 = 102
$\Rightarrow$ c = 20
Now a + c = 36
$\Rightarrow$ a + 20 = 36
$\Rightarrow$ a = 16.

34. B As per the data in the question when Sangeeta's wrist-watch moves 62 minutes Swati's wrist-watch moves only 56 minutes.
$\Rightarrow$ When Sangeeta's wrist-watch will move 620 minutes, Swati's wrist-watch will move only 560 minutes.
So there will be a difference of 60 minutes between the times shown by the wrist-watches of Sangeeta and Swati.
$\Rightarrow$ If Sangeeta's wrist-watch shows 10 p.m., Swati's wrist watch will show 9 p.m.

For questions 35 and 36:



Let the thief and the police meet after time 't'.
Distance travelled by the thief = $9\sqrt{2}$ t
Distance travelled by the police = 15t

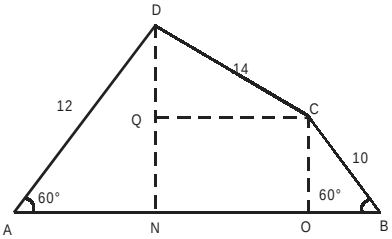
In ΔABD is 45° – 45° – 90° triangle
$\therefore$ AD = 9t
$\therefore$ BD = 9t
ΔADC is a right angle triangle
$\therefore$ CD = 12t
BC = BD + CD
$\Rightarrow$ 7 = 9t + 12t

$\Rightarrow t = \frac{1}{3}$ hour.

35. D Required time taken = 20 minutes.

36. C Distance travelled by police $= 15 \times \frac{1}{3} = 5$ km.

37. C



Drop perpendiculars DN and CO from D and C respectively on the side AB.

AN = 6 units and OB = 5 units

$\left(\text{Applying } \cos\theta = \frac{\text{Base}}{\text{Hypotenuse}} \text{ in } \Delta DAN \text{ and } \Delta COB\right)$

$\Rightarrow DN = 6\sqrt{3}$ and $CO = 5\sqrt{3}$ units

Using Pythagoras' Theorem,

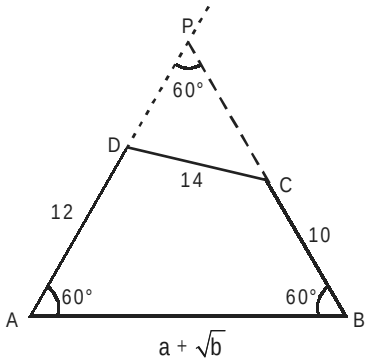
$\Rightarrow DQ = \sqrt{3}$ units $\Rightarrow QC = \sqrt{(14)^2 - (\sqrt{3})^2} = \sqrt{193}$ units

Therefore, AB = AN + NO + OB

$= 6 + \sqrt{193} + 5 = 11 + \sqrt{193} = a + \sqrt{b}$

Hence, a + b = 204.

Alternate method:



Sides BC and AD are extended to meet at point P.

Let PD = x, PC = x + 2

In Δ PDC, $\cos 60° = \frac{x^2 + (x+2)^2 - 14^2}{2x(x+2)}$

$\Rightarrow x = \frac{-2 \pm 2\sqrt{193}}{2}$

$\Rightarrow x = -1 \pm \sqrt{193}$

In ΔPAB,

PA = PB = AB

$\Rightarrow 12 + x = a + \sqrt{b}$

$\Rightarrow 12 - 1 + \sqrt{193} = a + \sqrt{b}$

$\Rightarrow 11 + \sqrt{193} = a + \sqrt{b}$

$\Rightarrow a = 11, b = 193$

$\therefore a + b = 11 + 193 = 204.$

38. C Total number of ways in which five person can stop at seven stations = 7^5

Number of ways in which five persons can get down at seven stations such that each stations is different = $^7P_5$

Hence, required probability = $\frac{^7P_5}{7^5}$.

SECTION B: VERBAL AND LOGICAL ABILITY

39. B Even though the passage says that environmental conditions during early phases in an organization's development have long term consequences, we cannot definitely say whether these long term consequences will be positive or negative i.e. leading to success or failure. To assume that the environmental condition at an early stage was one of the reasons for the success of Tata Steel is therefore a farfetched conclusion.

40. D The passage clearly states that changes in an organization's core features are disruptive and increase mortality hazards. Thus if one were to change the entire configuration of an organization's core features like strategy, structure and systems then it would increase the vulnerability of the organization.

41. B Option (B) details the kind of market concentration prevalent in the Indian textile industry. As per the Resources partitioning theory mentioned concentration does influence the viability of industries.

42. C The question statement is internally contradictory as it states that the success of Tata Steel could lead to its failure in the future and at the same time it also suggests that Tata Steel should recognize its strengths and stick to them.

43. A Sentence A is grammatically correct. It correctly uses 'loose' as a modifier and 'lose' as a verb.

44. D In the first sentence of the passage the author mentions that "the particular language one speaks influences the way one thinks about reality"; we can infer from these lines that there is a possibility of people with similar intelligence speaking the same language.

45. A 1 only.
The Sapir-Whorf theory states that the language one speaks influences the way one thinks about reality. The passage also says that the theory also considers how using a given language code in a particular way may influence thinking. From this, (1) naturally follows as a conclusion that if the govt. wants to develop vernacular languages it should promote public debates and discourses, since these encourage the use of language in a particular manner of discursive thought and discussion.

46. D Statement 1 is clearly false because the passage does not make any mention of the virtues of silence, making it the correct answer choice.

47. E The argument states Hata Yoga to be a difficult practice and it also vociferously mentions that 'Hata Yoga' can be sustained by a few resolute souls. The argument also says with certainty that philosophers do not encourage the practice as it has had its toll in the past. Therefore if we consider the facts mentioned in statement E to be true- percentage of successful practitioners of 'Raja Yoga' is higher than that of the practitioners of 'Hatha Yoga', the argument would be strengthened. All the other options talk of people currently practicing "raja Yoga" which does not affect the argument as the discussion is about successful completion of the practice.

48. A Option A reiterates what is stated by Shankaracharya, making it the correct answer. Statements B, C and D are not specific to the comments of Shankaracharya. Statement E is contrary to Sankaracharya's comments.

49. A The 1st challenge is to carve out a niche for themselves in a situation where "green issues" are becoming a part of mainstream social & political thought. Option (A) is closest in meaning to this challenge, and is the correct option.

50. A The main idea of the passage is the "strategic conundrum "that the green parties face about reconciling their "radical, alternative politics with participation in mainstream or 'grey' parliamentary and government structures." The challenge for them is to shift from activism to governance. This is captured in option (A).

51. C If mainstream political parties include green agenda in their governance the very existence of green parties would become redundant, making C the correct answer choice.

52. E Statement E is a reiteration of Hume's view mentioned in the argument. Options A, B and C are not specific to Hume's view. Option D mentions 'varied application' whereas Hume's view is about application of 'varied labour' making it incorrect.

53. A Statement A is a reiteration of Hume's view mentioned in the argument- "commerce was of mutual advantage to the nations involved". All the other options are too broad.

54. B The idea intended is best expressed by using the future perfect continuous tense. Statement B expresses it aptly.

55. A Option A is grammatically correct. Option B is incorrect as 'not' is missing after 'aspirants had'. Option C is incorrect as it uses 'took' instead of 'taken'. Option D is erroneous because it does not have a 'not' after 'aspirants had' and it also uses 'took' instead of 'taken'. Option E is incorrect because it uses 'all' instead of 'each'.

56. B 3 introduces the idea, making it the obvious opener. The pronoun 'this' in 2 refers to the idea in 3, making 3-2 the mandatory pair. 4 takes the idea forward and 1 concludes the idea, making 3,2,4,1 as the correct sequence.

57. A Statement 1 is the obvious opener. In 2 the word 'these' relate to the concepts mentioned in 1. 3 is a conclusion made by the author from 1 and 2. 4 makes an exception to 3. Thus the correct sequence is 1, 2, 3, 4.

58. C Euphemism is a figure of speech used to state a harsh or strong idea in a milder form. Option C uses euphemism as it says "pass away" for death.

59. B Non-sequitur means an inference or conclusion that does not follow from the premises or evidence. Option B contains such an argument.

60. B The relationship expressed here is antonymous. Beleaguered is an antonym of non-chalant.

61. C The method of reasoning used in the argument is arriving at a general conclusion from specific data. The author uses 'large number of visitors to the Corbett national park' to conclude that Nature lovers like to visit forests and natural parks. C follows the same method of reasoning as it draws a general conclusion from a specific example.

62. E The argument is a simple case of definitive statements by both the parties without any substantial data, so to resolve the conflict we have to take into account the data that validates either of the claims. Statement E best does this by evaluating the accuracy of the predictions by each of the disciplines.

63. A The author says that education offers intellectual development in a specific field only. Statement A is contradictory to this statement, hence it undermines the author's contention.

64. C The argument states that in the current era of global capital flows, inflation cannot be countered with the tightening of monetary policy by a particular country as there is a free flow of money amongst countries. Therefore, option C can be logically inferred from the argument.

65. A The argument states that experience entrepreneurs believe in participatory form of administration. The question asks us to provide the reason for this inclination. Option (A) best provides the reason for this inclination.

66. A The argument makes a general conclusion- all parliamentarians voted as per their conscience from the specific example of the parliamentarians whom he interviewed. This makes it an inductive generalization.

67. E The argument is analogical because it compares a man discarding garments and the soul discarding bodies.

68. D An oxymoron is a figure of speech which highlights two contrasting qualities in the same statement. In option D kindness and suffocating are contradictory ideas, making it the correct answer.

69. B The passage talks of the relation between influence and power. Statements 1 and 3 summarize this idea. Option 2 is contradictory; option 4 is too definitive.

70. C The last sentence states that a king may have some 'influence' on standards of morality. (C) follows from this since it mentions that a king can 'indicate' the appropriateness of the drama enacted wherein the latter is a reflection of the prevalent moral standards.

71. B A metaphor is a figure of speech in which a word or phrase that ordinarily designates one thing is used to designate another, thus making an implicit comparison. In option B defining a capitalist as 'a parasite on the back of labour' is a perfect example of a metaphor.

72. E Statement E personifies democracy.

73. A A hyperbole is a figure of speech using exaggeration. In statement A the idea of 'giving the Earth' is clearly an exaggeration.

SECTION C: ANALYTICAL REASONING & DECISION MAKING

For questions 74 to 78:

According to the given data provided in the question, direct inferences that can be made are:

1. Only one college was rated as 3-star and one as five star.
2. Barla college was rated as 5-star.

It is also given that Ms. Reddy joined 'Anipal Institute'

Since Sarah(Ms.) joined at 'Techno institute', Mohan and Jackie are not Ms. So either Priya or Swati has to be Reddy. Also, Mohan cannot study in Techno, Anipal or Barla. So he joined either Deccan or Chemical.

It is given that Ms. Kumar and Jackie joined a 4-star college and Swati's last name was not Chatterjee. Chemical college had a rating one less than that of the college where Sanyal joined. So it has to be either a 3-star or a 4-star college. But Mohan joined Deccan or Chemical, a 4-star. Barla is a 5-star. Deccan, Techno and Chemical are 4-stars.

So Anipal is a 3-star and Priya Reddy joined Anipal. Sanyal joined a 5-star rated college, so Swati should have joined there. Based on the inferences, the following table can be formed:

Name (Sex)	Surname	College	Rating (In star)
Sarah (F)	Kumar	Techno	4
Swati (F)	Sanyal	Barla	5
Jackie (M)	Chatterjee	Deccan /Chemical	4
Mohan (M)	Gupta	Chemical/ Deccan	4
Priya (F)	Reddy	Anipal	3

74. D

75. A

76. B

77. E

78. B

For questions 79 to 83:

Stage 3 finished at point P1 and the work in the stage 4 was done by F4.

It is given that one of the stage starts with P5 and ends with P3, and that stage cannot be the stage 1 (Condition 4), stage 3 (Condition 6), stage 4 (Condition 6) or stage 5 (Condition 4).

Hence, stage 2 starts and ends with point P5 and P3 respectively.

Therefore, F3 has ploughed in stage 1 (Condition 7).

So stage 5 will start and end with P4 and P2 respectively (Condition 3)

So the work of stage 2 and stage 3 will be done by F1 and F2 respectively (Condition 6).

Based on the inferences, the following table can be formed:

Stage	Starting point	Finishing point	Farmer
1	P2	P5	F3
2	P5	P3	F1
3	P3	P1	F2
4	P1	P4	F4
5	P4	P2	F5

79. E

80. B

81. A

82. A

83. E

For questions 84 to 86:

It is given that Mukesh's score = 4 + Lina's score.

Since Lina's team didn't score the least number of points, the points of Mukesh's team and Lina's team will be 8 and 4 respectively.

Since Mukesh will be in the group with a score of 8 and Sanjeev and Lina in the group with a score of 4, Tapas and Sania will necessarily be in 'Just Singing'.

Now since Bindas team had a score of 2 more than that team in which Laxman is there so the score of 'Bindas Singers' will be 4 and Laxman will be in 'Sweet Couple'. Therefore, Sanjeev and Lina will be in 'Bindas Singers'.

Waheda is in 'Sweet Couple' as she is not in 'New Singers'.

Based on the inferences, the following table can be formed:

Teams	Points	Team Members
Sweet Couple	2	Laxman & Waheda
Bindas Singers	4	Sanjeev & Lina
Just Singing	6	Tapas & Sania
New Singers	8	Mukesh & Divya

84. E

85. D

86. D

87. E The answer is 'may be never' because it is not possible to find out the year in which Shekhar is going to break even simply from the data provided. While the sales in Patna and Bistupur may be the same, the costs (for example rentals) may be very different in Patna compared to Bistupur and hence we cannot predict that Shekhar will enjoy the same profit margin as the franchisee in Patna. Thus in the absence of complete information we cannot predict any certain figure for break-even and therefore "may be never" is the best choice.

88. E 'Patronage' here means the support that a person gives to a shop/store etc. by spending money there. Refer to the lines "Most upper middle class customers shopped there". Thus option (E) is the most appropriate choice.

89. D Shekhar has made his initial assessment based on his impression of the 'low image' of Sakchi and his expectation that the college going crowd of Bistupur would be his target market. Since this has landed him in confusion, he should do a more in-depth study to find the drivers and potential of the business before coming to a conclusion.

90. C Shekhar's decision on whether to take up the Music World franchise would depend to a large extent upon how well he expects the business to grow in future. This would impact his decision, for instance, to set up the store in Sakchi rather than Bistupur if the market really is expected to grow there in future. Factors like real estate prices and profitability of business in first two years would be short-term factors while factors such as changes in the music industry would be largely beyond the scope of decision-making.

For questions 91 to 94:

Since Mr. Singh didn't teach on Monday and Thursday, he must have taught on Friday.

Mr. Banerjee taught on Thursday because he taught on a day which started five minutes late and it cannot be Monday as on Monday class started at 7.00 a.m.

Now, probability was neither taught by Mr. Chatterjee nor by Mr. Banerjee so it was taught on Monday by Mr. Dutta.

Hence, the class on Thursday started at 7.05 a.m. and we get the complete table as:

Day	Name	Subject	Time
Monday	Mr. Dutta	Probability	7.00 a.m.
Wednesday	Mr. Chatterjee	Calculus	7.20 a.m.
Thursday	Mr. Banerjee	Ratio & Proportion	7.05 a.m.
Friday	Mr. Singh	Set Theory	7.10 a.m.

91. A

92. B or D

93. E

94. E

95. D Since the question specifically mentions expected value hypothesis, options A, B and C are negated as they are based on expected utility hypothesis. Thus, option (D) is the correct choice.

96. A Since Babitha is playing the game for the first time, the issue of diminishing sensitivity would not apply and Babitha being a risk taker by nature would go for the first option because it promises the highest gain with the lowest probability.

97. B Since Babitha has already played the game once, the theory of expected utility, which factors in the idea of diminishing sensitivity would help her in arriving at a better decision.

98. A Bablu is indifferent between instant and further utility. Therefore, the theory of expected utility hypothesis is not applicable in his case. Therefore, he can make a better decision by using the expected value hypothesis.

99. C The learning from the solitaire incident is that people in certain roles would have different ways of carrying out their duties. The way Rabindra reacted to the solitaire incident and took a unilateral decision without informing his supervisor clearly illustrates this.

100. D In this option both the problem and its justification are correctly linked. Rabindra jumping to conclusions without investigating whether Om had carried out his duties is the root problem with the right justification for it.

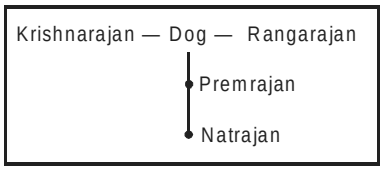
101. A In order to resolve the issue it is necessary to revoke Rabindra's order because it was definitely a harsh punishment for a small act of negligence not properly investigated. This would resolve the issue and communicating the right reason for it would benefit the organization as a whole.

102. D The problem that Rabindra's decision created lay with the fact that he acted on impulse without investigating the matter properly. Hence D is the right choice.

103. D Their respective position Before Premrajan joins in:

Natrajan — Rangarajan — Krishnarajan — dog.

Then Premrajan joins and runs "behind" Rangarajan. So the final position becomes



Hence, Premrajan is just behind the dog.

104. E Beaker A and Beaker B will hold the same amount of water as above the level of nozzle in Beaker B, the water will start over flowing.
Clearly Beaker D will hold the Maximum amount of water.
Beaker C will hold least amount of water because it does not have the nozzle as compared to Beaker A.
Hence, D > A = B > C