ANSWER KEY - SNAP 2008

1	b	**2**	c	**3**	b	**4**	a	**5**	c	**6**	d	**7**	d	**8**	b	**9**	b	**10**	a
11	b	**12**	d	**13**	d	**14**	*	**15**	a	**16**	a	**17**	b	**18**	b	**19**	b	**20**	d
21	d	**22**	c	**23**	d	**24**	b	**25**	c	**26**	d	**27**	d	**28**	b	**29**	b	**30**	a
31	d	**32**	b	**33**	c	**34**	b	**35**	d	**36**	c	**37**	c	**38**	d	**39**	b	**40**	c
41	c	**42**	c	**43**	c	**44**	c	**45**	a	**46**	c	**47**	a	**48**	b	**49**	a	**50**	a
51	b	**52**	d	**53**	d	**54**	b	**55**	a	**56**	c	**57**	c	**58**	d	**59**	b	**60**	b
61	b	**62**	a	**63**	a	**64**	a	**65**	b	**66**	d	**67**	d	**68**	c	**69**	d	**70**	b
71	b	**72**	a	**73**	a	**74**	c	**75**	b	**76**	d	**77**	a	**78**	b	**79**	c	**80**	b
81	b	**82**	a	**83**	c	**84**	a	**85**	d	**86**	a	**87**	b	**88**	a	**89**	d	**90**	c
91	b	**92**	b	**93**	c	**94**	d	**95**	b	**96**	d	**97**	a	**98**	d	**99**	d	**100**	b
101	b	**102**	b	**103**	c	**104**	b	**105**	a	**106**	d	**107**	c or b	**108**	c	**109**	a	**110**	b
111	b	**112**	b	**113**	c	**114**	b	**115**	d	**116**	b	**117**	d	**118**	d	**119**	c	**120**	d
121	c	**122**	a	**123**	a	**124**	a	**125**	b	**126**	b	**127**	b	**128**	d	**129**	b	**130**	c
131	d	**132**	b	**133**	c	**134**	d	**135**	b										

SOLUTIONS - SNAP 2008

1. b We can only find the duration of reported breakdown from the above given graph but cannot find the actual loss of production because we do not know the actual production.

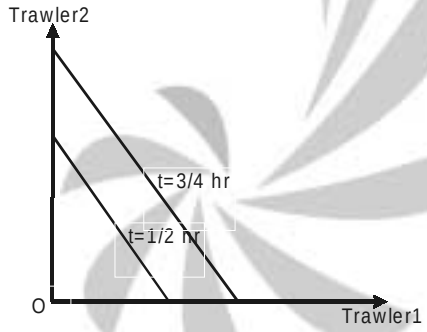
2. c Suppose consecutive pages, numbered n to m are missing. The only information given is that the sum of numbers m, m + 1, m + 2, …, n is 9808. As there is no clue on the problem statement for the values of we do not know the values n or m or (n – m), elimination of the options is the only way to solve this problems. As we are given that consecutive pages are missing, we eliminate options (a) as it talks about a single page, numbered 9808. Consider option (c). The sum of numbers from 291 to 322 is:

$$291+292+293+\ldots+322=\frac{322\times323}{2}-\frac{290\times291}{2}$$

= 9808.
Clearly, option (c) is correct.

3. b $2 + 1^2 = 3$
$3 + 3^2 = 12$
$12 + 5^2 = 37$
$37 + 7^2 = 86$ … and so on.
Hence, there should be 12 in place of 13.

4. a The two trawlers move in perpendicular directions, as shown below.



Let the speeds (in km/h) of the two trawlers be x and y respectively. After $\frac{1}{2}$ hours, the distances covered by them are $\frac{x}{2}$km and $\frac{y}{2}$km. We have,

$$\left(\frac{x}{2}\right)^2+\left(\frac{y}{2}\right)^2=17^2 \quad \text{Or}$$

$$x^2+y^2=34^2 \qquad \ldots(i)$$

After $\frac{3}{4}$ hours, one of the trawlers is 10.5 km farther from the origin than the other one. We can write:

$$\left|\frac{3x}{4}-\frac{3y}{4}\right|=10.5 \quad \text{Or}$$

$$|x-y|=14 \qquad \ldots(ii)$$

Solving (i) and (ii), we get x and y as 16 km/h and 30km/h.

5. c

	Number Of Adult Residents		
Hotel	**1-Feb-98**	**1-Jul-98**	**Increase**
V	96	114	18.75%
W	39	55	41.02%
Y	64	96	50%
Z	167	193	15.56%

At 50% increase, hotel Y observed the greatest increase in the total number of adult residents.

6. d From statement I alone, we get the common difference but nothing can be said about the 57th term.
From statement II alone, we get the tenth term but nothing can be said about the 57th term as we do not know the common difference.
Combining both the statements we can derive the common difference as well as the first term of the series, and hence, the 57th number.

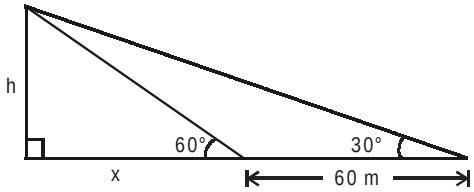
7. d As 1 Hectare = 10^4 m^2

$$\text{Area of the square field} = \frac{2624.40}{160} = 16.4025 \text{ hectare}$$

$$= 16.4025\times10^4 \text{ m}^2 = (405)^2 \text{ m}^2$$

∴ Side of the square = 405 m
∴ Perimeter = 4 × 405 = 1620 m
∴ Cost of railing surrounding it
= 1620 × 0.25 = Rs.405.

8. b



Let 'h' m be the height of the tower and 'x' m be the length of shadow finally.

We have two equations in variables h and x.

$\frac{h}{x} = \tan 60° = \sqrt{3}$ … (i)

And, $\frac{h}{x+60} = \tan 30° = \frac{1}{\sqrt{3}}$ … (ii)

From (i) and (ii), we get

$h = \frac{60}{\left(\sqrt{3} - \frac{1}{\sqrt{3}}\right)} = 51.96$ m.

For questions 9 to 12:
From the given data, we can find out the exact number of persons who watch less than one movie per week.
For example, in city A:
The percentage of persons who watch movies = 100 – 60 = 40%

$\therefore$ Total number of persons in city A = $\frac{2400}{40} \times 100 = 6000$

$\Rightarrow$The total number of persons in city A, who don't watch movies = 6000 – 2400 = 3600.
Similarly, we can find for the other cities as shown in the following table.

City	Less than one Movie per week	One or More Movies
A	3600	2400
B	750	3000
C	13600	2400
D	3300	2700
E	24000	8000

9. b There are 13600 persons who watch less than one movie in a week.

10. a The number of persons who watch less than one movie in a week is the highest, 24000, in city E.

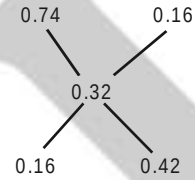
11. b In city D, the number of movie watchers is 2700, which is the second lowest amongst the 5 cities.

12. d This is calculated as: 3600 + 750 + 13600 + 3300 + 24000 = 45250.

13. d The number of terms in the series a, b, b, c, c, c, d, d, d, d, … forms the sum of first *n* natural numbers, i.e., $\frac{n(n+1)}{2}$.
The first 23 letters will result in $\frac{23 \times 24}{2}$ = 276 terms of the series.
The first 24 letters will result in 276 + 24 = 300 terms of the series.
Hence, the 288th term will be the 24th letter, 'x'.

14. * The inequality $p^2 + 5 < 5p + 14$ can also be written as $p^2 - 5p - 9 < 0$. Find the roots of the quadratic equation $p^2 - 5p - 9 = 0$. The roots are:
$\frac{5+\sqrt{61}}{2}, \frac{5-\sqrt{61}}{2}$ Or 6.4 and – 1.4.
Hence, the inequality can be written as:
$(p - 6.4)(p + 1.4) < 0$
$\Rightarrow -1.4 < p < 6.4$.
Option (a): p = –1 satisfies. All values of p such that $p \le 6$ may not satisfy. Hence, option (a) is incorrect.
Option (b): p = 6 satisfies but p = –2 does not satisfy. Hence, option (b) is incorrect.
Option (c): All values of p such that $p \le 1$ or $p \le 6$ may not satisfy. Hence, option (c) is incorrect.
Option (d): p = 1 satisfies. All values of p such that $p \ge 6$ may not satisfy. Hence, option (d) is incorrect.
*** None of the answer choices is correct.**

15. a Sweetness of Maltose, Lactose and Glucose is 0.32, 0.16 and 0.74 respectively.



So by allegation we get, the ratio of Glucose to Lactose as 0.16 : 0.42 = 8 : 21.

16. a Let the one of the sides be of x unit.
Therefore, total surface area of the half cut cube having dimentions x, x, $\frac{x}{2}$ will be $4x^2$. And area of non painted surface will be x^2. Therefore, the required answer is 25%.

17. b In order to go from one station to another and come back to the starting one, we need 2 tickets.
Number of ways to select 2 stations out of 10 = ${}^{10}C_2$.
$\therefore$ Number of different journey tickets required by the authorities = $2 \times {}^{10}C_2 = 90$.

18. b Probability of A's win

$= \frac{1}{6} + \left(\frac{5}{6}\right)^2 \frac{1}{6} + \left(\frac{5}{6}\right)^4 \frac{1}{6} + \ldots$

$= \frac{1}{6}\left[1 + \left(\frac{5}{6}\right)^2 + \left(\frac{5}{6}\right)^4 + \ldots\right] = \frac{1}{6} \times \frac{1}{1 - \left(\frac{5}{6}\right)^2} = \frac{6}{11}$

Probability of B's win = $1 - \frac{6}{11} = \frac{5}{11}$

$\therefore$ Expectation of A's win = $\frac{6}{11}(11) + \frac{5}{11}(0) = 6$

$\therefore$ Expectation of B's win = $\frac{6}{11}(0) + \frac{5}{11}(11) = 5.$

19. b Under option A
Premium received is Rs.0.50
Profit after tax = 70% of Rs.0.50 = Rs.0.35

$\text{Profit \%} = \frac{0.35}{75} \times 100 = 0.467\%$

Under option B
Premium received is Rs.0.40

$\text{Profit \%} = \frac{0.40}{90} \times 100 = 0.444\%$

Hence, A give a better return.

20. d There are 9 white chips in all and also, every stack needs to have atleast one chip of each colour. Hence, maximum number of white colour chip any stack can have is 6.

21. d Difference in hourly usage of gas by both the burners

$$= \frac{14.4}{80} - \frac{14.4}{104} = \frac{14.4 \times 3}{1040}$$

Required percentage

$$= \frac{14.4 \times 3}{1040} \times \frac{80}{14.4} \times 100 = 23.07\%.$$

22. c **Statement I:** a = 73, b = 103

$$\therefore \frac{a+7}{b+7} = \frac{80}{110} > \frac{73}{103} = \frac{a}{b}$$

Statement II: $a < \frac{a+b}{2} < b \Rightarrow \frac{a}{b}$ is less than 1.

Since, a < b and the numerator and denominator are increased by the same quantity, therefore, the new fraction $\frac{a+7}{b+7}$ will be greater than $\frac{a}{b}$.

Statement III: a – 5 > b – 5 which implies a > b, i.e., $\frac{a}{b}$ is greater than 1.
Since a > b and the numerator and denominator are increased by the same quantity, therefore, the new fraction $\frac{a+7}{b+7}$ will be less than $\frac{a}{b}$.

Hence, any of the two statements can be dispensed with.

23. d Coefficient of variation is useful for studying all of the Risk, Disparity and Consistency.

24. b Let the speed of the cyclist and wind be 'x' and 'y' respectively.
Effective speed with the wind = x + y = 1/3
Effective speed against the wind = x – y = 1/4

Therefore, we get the value of x as $\frac{7}{24}$

Now, time taken to drive one kilometer without wind

$$= \frac{1}{\left(7/24\right)} = 3\frac{3}{7} \text{ minutes.}$$

25. c Let P be the investment for a total time period of T.

Profit shares of A = $\frac{P}{2} \times \frac{T}{3}$;

B = $\frac{P}{3} \times \frac{T}{4}$;

C = $\frac{P}{6} \times T$

∴ Ratio of their profit shares

$$= \frac{P}{2} \times \frac{T}{3} : \frac{P}{3} \times \frac{T}{4} : \frac{P}{6} \times T = 2 : 1 : 2.$$

26. d Total number of combination of the numbers on the three rings will be 10 × 10 × 10 = 1000.
Total number of cases in which lock cannot be opened will be 1000 – 1 = 999.

27. d Let the number of first class ticket bought be 'x' and number of second class ticket bought be 'y'.
So from the given information, we get two equations:
10x + 3y = 110 …(i)
x + y = 18. …(ii)
Solving these two equations, we get the value of x and y as 8 and 10 respectively.
So if the number of tickets bought of two types are interchanged then the total cost incurred will be 10 × 10 + 3 × 8 = 124.

28. b The clock is losing 12 minutes every 24 hours.
Hence, by 1:45 p.m. the following day i.e. after 18 hours the clock would have lost 9 minutes. And in the next 20 minutes. it would have lost another 10 seconds.
Hence, when the clock showed 1:45 p.m. actual time would have been 1:35:50 p.m.

29. b From the given information we conclude that A is standing 7th from the left and B, 11th from the left. It is also mentioned that B is standing 9th from the right. Hence, we can say that in all there were 11 + 8 = 19 people standing in the row.

30. a Profit under option I = 30%

Profit under option II $= \frac{115-85}{85} \times 100 = 35.29\%$

Profit under option III $= \frac{1000-700}{700} \times 100 = 42.85\%$

Profit under option IV = $\frac{1300-1000}{1000} \times 100 = 30\%$

Hence, option III is the most profitable.

For question 31 to 34:

31. d With 40 defects per thousand, the Hybrid Micro Circuits is most likely to fail and hence the least reliable of all the listed components.

32. b The failure rate of Signal Devices is 16 per thousand. For a 25% more failure rate, the device should have a failure rate of $16 \times \frac{5}{4} = 20\%$ failure rate. This failure rate is observed in Capacitors.

33. c The components that exhibit a relatively lower failure rate are least likely to fail and hence, should be at the lowest priority for investing in any changes or addition to the component manufacturing units. The Picture Tubes and the Signal Devices exhibit the two lowest failure rates i.e. 15 per thousand and 16 per thousand.

34. b In 400 Integrated Circuit Boards, number of likely failures

$$= 400 \times \frac{30}{1000} = 12$$

In 240 Capacitors, number of likely failures

$$= 240 \times \frac{20}{1000} = 4.8 \approx 5$$

In 120 Printed Circuit Boards, number of likely failures

$$= 120 \times \frac{33}{1000} = 3.96 \approx 4$$

Hence, the number of spares of Integrated Circuit Boards, Capacitors and Printed Circuit Boards are 12, 5 and 4 respectively.

35. d If there is a rain fall of 0.1 mm on the roof, then there will be a uniform layer of water with a depth of 0.1mm. Let the water rises to a height of h m in the cylindrical container. As the volume of the water on the roof and in the container must remain the same, we must have:

$$9 \times \frac{0.1}{1000} = \frac{900}{10000} \times h \Rightarrow h = 0.01 \text{ m} = 1 \text{ cm.}$$

36. c Option (c) is correctly matched as the phrases contain these words. 'palm off the blame', 'foot the bill', 'not have a strong stomach', 'have an eye on something'.

37. c In i) it would be 'opportunities will arise', in ii) it would be 'a hot wind arose' iii) would be 'I arise at dawn' and iv) would be 'a mood of optimism arose'. Thus the word Arise fits in two sentences, similarly Arose also fits in two sentences only making (c) as the correct answer option.

38. d Options 1 and 3 mean the same. 'To live in a fool's paradise' would mean 'to live in a fanciful world unaware of the reality'. Options 2 and 4 might look similar but ' not seeing the wood for the trees' means 'not being able to understand what is important in a situation because of an excessive attention to details' so it is not the segregation of unimportant details from the important ones but failing to comprehend the overall situation, this makes (d) the correct option.

39. b In sentence 6, 'then' functions as a noun because 'then' in this sentence refers to a time-period. In sentence 5, 'then' functions as an adjective, because then modifies the noun 'King'; 'first' etc. In sentence 8, 'then' functions as an adverb. In sentence 6, 'then' functions as a conjunction because it joins two clauses. This makes (b) as the correct answer choice.

40. c Option (a) although it looks close has a defining tone which does not match with the tone of the author in the passage. (b) is out of the scope of the argument. (d) is incorrect because it talks about 'reasoning abilities' however, the passage talks about 'beliefs'. (c) captures the view of the author expressed in the argument.

41. c The author mentions 'Sanctimonious greens' in the beginning of the second paragraph while referring to the conceited environmentalists.

42. c Refer to the lines 'congestion would eat into the time of the elite.'

43. c The author mentions the paradoxical situation in the third paragraph; refer to the line 'London and New York have ultra-high car densities, yet clearer air than Delhi.'

44. c The author passes a sarcastic remark in the 5th paragraph while referring to the parking space.

45. a In the 8th paragraph, the author says that India expects the rich countries to reduce their green house emissions but she subsidies her own. Then he substantiates his statement by quoting the harms of diesel run vehicles. The author continues his argument in the 9th paragraph where he talks about the subsidy on kerosene and its corrupt use. This makes (a) as the correct answer option.

46. c The author talks about subsidies and their ill-effect on the environment throughout the passage, thus making (c) the correct option. (a) becomes incorrect because the author is not talking about politics, however he talks of faulty government policies as the cause for subsidies. (b) is incorrect as Nano is taken only as an example. (d) is contradictory to the passage, hence it is incorrect.

47. a The only correct plural for Virus is Viruses.

48. b Sentence 4 introduces the topic, sentence 3 continues the idea forward. 2 further talks of the demand of the 'education group', sentence 1 gives the reason for this demand, making 4, 3, 2,1 the correct sequence. Thus, (b) becomes the correct answer choice.

49. a The plural for belief is beliefs.

50. a 'Pedestrian' means lacking wit or imagination. It also means ordinary. Thus a 'pedestrian story' fits the context. (b) is incorrect because the use of not in the sentence alters the meaning. (c) should have 'a' before pedestrian. In (d) 'pedestrian lecture' is incorrect as a lecture can be boring.

51. b 'everyone' is an indefinite pronoun that fits the context.

52. d In B, it should be 'who think' and in C it should be 'they own the world'. This makes option (d) the correct answer choice.

53. d Option (d) is the correct meaning of the word 'cynic'.

54. b 'diarrhoea' is correctly spelt. 'catagories' should be 'categories'. 'ommission' should be 'omission'. 'inaugarate' should be 'inaugurate'.

55. a 1 and 2 are correct. In 3 an article should be added before 'painting'. In 4 'match with' is incorrect. It should be 'match the furniture'.

56. c Both 'A two day's visit ' and 'A two days'' visit are incorrect. The correct expression is 'a two day visit'.

57. c The author clearly mentions that ' it was the modest purpose of Rome to obtain a simple head count as an adequate basis for levying taxes' in the first paragraph making (c) as the correct answer choice.

58. d The author clearly mentions this in the 3rd paragraph where he says "high-powered statistical methods……statisticians assume''.

59. b The author's attitude towards the subject-matter is scornful; it is evident from the lines "there was the thought…..a fair maiden" in the second paragraph.

60. b The meaning of disinterested is unbiased. Rest of the options are incorrect.

61. b BERATE means to condemn someone, therefore praise is the opposite of berate.

62. a ii introduces the subject, i completes the half-sentence in ii; ii and iv are a 'mandatory pair', iii completes the idea.

63. a 'natural', 'inborn' and 'inherent' are synonyms. 'Latent' means dormant, therefore it does not belong to the group.

64. a completes the sentence without changing the person, tense or the structure of the sentence.

65. b This option is correctly matched.

66. d 'Honey taste' is a non-existent phrase/ word. 'Honey pot' means a desirable object or a source of money. 'Honeysuckle' is a plant. 'Honeycomb' is the name given to wax cells built by bees in their nests.

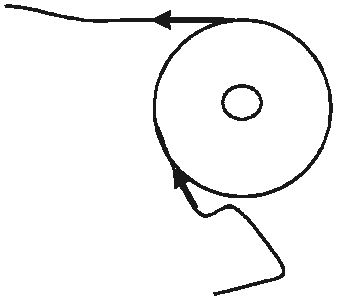
67. d Refer to the lines 'they were counting on their reputation…..sell orders' in the second paragraph.

68. c The first line of the passage clearly states 'lack of confidence in the stock market's ability'. Thus option (c) is the correct answer.

69. d Refer to the second line of the second paragraph.' Negligible' and 'minimum' are synonyms of 'minimal'. 'Maximal' means highest, which does not fit the context here as 'minimal' is not talking purely about number-limit but the insignificance of the orders; therefore, 'significant' makes the correct answer choice.

70. b When referring to the position, the correct phrase to use is 'opposite the'. 'Opposite of' means unlike. (b) is the correct answer choice.

71. b Wheel D is the driver wheel. When wheel D is driven in the anti-clockwise direction, the section of the band passing through A and B tends to be pulled towards wheel D simultaneously, the section of the band passing through the wheels C, E, F and G tends to be pulled away from D. As a result, the part of the band on the upper side of wheel B is pulled away from the wheel and the part of the band on the lower side of wheel is pushed towards the wheel. This does not result in motion. Hence, option (b) is correct.



72. a A: 'Sun shines brightly' means **ba lo sul**
B: 'Houses are brightly' lit means **kado udo ari ba**
C: 'Light comes from sun' means **dapi kup lo nro**
The translations of statements in A and B must have the word 'bright' common to them. The only common word in the translations of A and B is **ba** hence the word for 'bright' is **ba**. Similarly, considering statements A and C together, we conclude that **lo** is the word for 'sun'.

73. a Let the square, triangle, circle and the rhombus be denoted by x, y, z and w respectively. From the given visual equations in geometric figures, we can now form 3 algebraic equations in x, y, z and w:

1. $xz = y$ 2. $x = zw$ 3. $y^2 = w^3$

From (2), we can write $x^3 = z^3 \times w^3$.

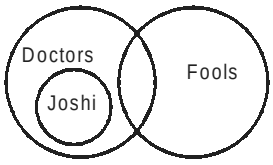
From (3), we can replace w^3 by y^2 to get $x^3 = z^3 \times y^2$.

From (1), we can write $y^2 = x^2z^2$ and replace y^2 in the above step to get $x^3 = z^3 \times (x^2 \times z^2)$.

$\Rightarrow x = z^5$
Hence, 5 circles are equivalent to a square.

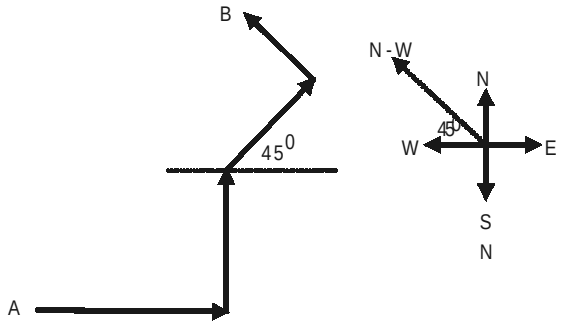
74.c Randomly select any one of all the children in the family. If this child were a male, then there must be at least 4 other male children in the family. This implies, the number of male children must be at least 4 + 1 = 5. Similarly, the number of female children must be at least 1 + 3 = 4. Hence, the smallest number of children in the family must be 5 +4 = 9.

75. b



Joshi is not necessarily a fool. So I does not follow. II follows because some fools are doctors.

76. d



Debu starts from A and now he is at B. As clear from the diagram, he is walking in the North-West direction now.

For questions 77 to 79:

77. a Number of cubes that have only one colour
= 2 × 4 + 1 × 2 = 10.

78. b Number of cubes that have no colour
= 36 – (2 × 12 + 4 × 2 + 2) = 2.

79. c Total number of cubes formed = 4 × 3 × 3 = 36
Number of cubes that have three colours = 4 + 4 = 8
Number of cubes that have any two colours
= 36 – (8 + 2 + 10) = 16.
Or, 6 × 2 + 2 × 2 = 16

80. b

	A	B	C
1	**6**	**3**	**8**
2	**2**	**7**	**1**
3	**4**	**9**	**5**

81. b 4 × 8 = 32
32 × 9 = 288
288 × 10 = 2880
2880 × 11 = 31680.

82. a Let the time when Seema left, each of the two ladies have 'x' lemons.

$$\therefore \frac{2x}{5} + 3.50 = \frac{x}{4} + \frac{x}{6} \Rightarrow x = 210$$

Required Loss $= \frac{x}{4} - \frac{x}{5} = \frac{x}{20} =$ Rs.10.50.

83. c Irrespective of the quantity of the liquid transferred, there will be an equal amount of each juice between the two cups.

84. a Only A is implicit. The statement mentions that 'education and small family norms may lead the nation to progress', this means that education and small family are related to the nation's progress and can affect the progress of the nation. B is not implicit because the statement does not hint towards any relation between the 'cost of education' and the size of the families. In fact, 'cost of education' is out scope of the main statement.

85. d The two words that can be formed using option (d) are IMMODEST and INDECENT.

86. a The neither draws a conclusion on the basis of an observation. He concludes, that beautiful beaches attract people from the fact that beautiful beaches are always

overcrowded. (a) follows the same pattern of reasoning. When it is seen that moose and bear feel thirsty at the same time because they appear at the drinking hole at the same time. (b) cannot be the answer because it follows a reverse pattern of reasoning (e.g. if A does not happen, then B happens). (c) is close but does not follow because it uses the which makes rigid to be conclusion as the one given in the main statement word 'must' too moreover, there is a comparison between two weathers and the writer reasons that because there are 'more fleas' in warm weather, therefore the fleas 'must' thrive in warm environment. This is not on the same line as the main statement. (d) is nowhere close to the reasoning as that in the main statement.

87.b Number of birds that were seen by only one person = 3
Number of birds that were seen by exactly two of the three persons = 3
Number of birds that were seen by all the three persons = 1
Total number of birds = 7
Only option (b) has a total of 7 birds

88. a Brook is a small stream of river. Brook, stream and river are flowing water bodies but lake is not. In II, 'weighty-heavy' is different because others are adjectives used for length but (J) is for weight. So (a) is the answer.

89. d 

Clearly C is at the position where A was initially.
B goes east to where C was originally.
Therefore, B and C are in diagonally opposite directions.

90. c Only choice (c) satisfies all the conditions given in the question.

91. b The 6th and the 16th children stand at two diametrically opposite ends. The diameter divides this circle in two halves. The 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th and 15th children must stand in one of these halves and between the 6th child and the 16th child. In other words, 9 children stand between the 6th child and the 16th child. As all the children stand in the circle evenly spaced, there must be exactly 9 children on the other half of the circle. Hence, including the 6th child and the 16th child, there are 9 × 2 + 2 = 20 students.

92. b The pattern followed in each column is
(8 + 5) × 3 = 39
(4 + 7) × 4 = 44
(9 + 3) × 5 = 60
Hence, the missing number is
(5 + 4) × 8 = **72**.

93. c The portion of the cylinder that has a smaller hole is heavier than the portion of the cylinder that has a larger hole.
Hence, after rolling, the cylinders will stop when their faces show  .

For questions 94 to 96:

From statement (iii), we conclude that A and D are females and that they do not play any games. This implies the three games viz. badminton, chess and tennis must be played by the other 3 persons viz. B, C and F. From statement (v), we conclude that E is a male and one of B or C is a female. From statement (vi), we conclude that B is a male and hence, C must be a female. The couple includes E and C. From statement (iv), we conclude that C plays tennis. From statement (vi), we conclude that B plays badminton and E plays chess. We can tabulate our conclusions as under:

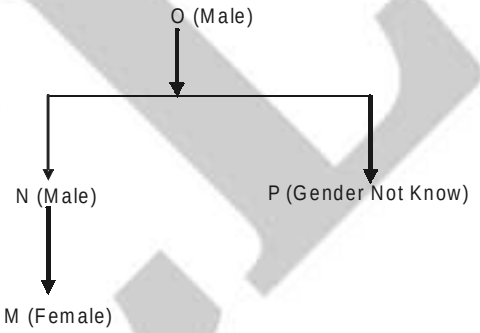
Person	Gender	Game
A	Female	None
B	Male	Badminton
C	Female	Tennis
D	Female	None
E	Male	Chess
E and C are the married couple.		

94. d Both B and E are males.

95. b C is the tennis player.

96. d E and C are the married couple.

97. a From the given information we can draw the following family tree:



As we already know that N is a male and is the father of M, hence, P can never be the father of M.

98. d On a hot day the air above the land is warmer than the air above the sea, so the pressure of air above the land is less than the pressure of the air above the sea. So, wind is most likely to blow from sea to land denoted by the direction D.

For questions 99 and100:

99. d The uneducated urban hard-working and honest people are represented by the area common to the rectangle, the triangle and the square and excluding the common area of circle. This area is marked by 4.

100. b The non-urban educated people who are neither hard working nor honest are represented by the part of the circle, which is not common to any of the other 3 figures. This part of circle is marked by 7.

101. b	102. b	103. c	104. b	105. a
106. d	107. c or b	108. c	109. a	110. b
111. b	112. b	113. c	114. b	115. d
116. b	117. d	118. d	119. c	120. d
121. c	122. a	123. a	124. a	125. b
126. b	127. b	128. d	129. b	130. c
131. d	132. b	133. c	134. d	135. b