ANSWER KEY - SNAP 2006

1	b	2	d	3	b	4	a	5	b	6	d	7	c	8	a	9	a	10	d
11	b	12	c	13	*d	14	b	15	*a	16	a	17	c	18	d	19	b	20	a
21	b	22	c	23	b	24	b	25	b	26	a	27	c	28	a	29	b	30	b
31	c	32	c	33	d	34	a	35	c	36	b	37	d	38	c	39	b	40	c
41	c	42	b	43	b	44	a	45	a	46	b	47	c	48	c	49	a	50	d
51	c	52	d	53	d	54	c	55	a	56	a	57	b	58	c	59	b	60	c
61	d	62	b	63	b	64	d	65	b	66	d	67	a	68	c	69	d	70	c
71	a	72	b	73	d	74	a	75	b	76	c	77	d	78	c	79	b	80	c
81	b	82	c	83	b	84	a	85	b	86	d	87	d	88	c	89	d	90	a
91	b	92	c	93	d	94	d	95	a	96	a	97	d	98	*	99	c	100	b
101	c	102	c	103	b	104	*	105	*	106	b	107	c	108	*	109	*	110	a
111	d	112	*	113	c	114	c	115	c	116	c	117	c	118	b	119	b	120	d
121	b	122	d	123	b	124	a	125	b	126	d	127	c	128	b	129	c	130	d
131	b	132	a	133	a	134	c	135	c	136	b	137	b	138	b	139	c	140	b
141	b	142	b	143	c	144	a	145	b	146	b	147	c	148	b	149	b	150	c
151	b	152	a	153	a	154	c	155	b	156	c	157	c	158	a	159	a	160	b

SOLUTIONS - SNAP 2006

1. b   The passage attributes the growth and development of early civilizations to rivers. The author says that rivers have played an important role in agriculture, settling of population, dealing with economic and social challenges, inculcating cooperation among villagers, technological and mathematical invention and advancement in trade. The first line of the second, fourth and fifth paragraph each lays emphasis on the role played by rivers in development of the early civilizations. Last line of the last paragraph also indicates the same. Only option (b) talks about the influence of rivers. So, (b) is correct. Option (a) can be ruled out as the correct option because similarities and differences have not been talked about in the passage. Only the introductory line talks about climatic change, so (c) can be eliminated. Technological invention has been discussed in the fourth paragraph only, hence (d) is negated.

2. d   The last few lines of the first paragraph say that the human population started migrating to the banks of rivers because the habitable and fertile grasslands in Egypt and Mesopotamia transformed into deserts. So it is implied that Egypt and Mesopotamia became densely populated. Hence, (d) is correct.

3. b   The fourth paragraph says that the first developments in geometry were stimulated by the need to keep track of land holdings and boundaries. Therefore, it is implied that landowners practiced the earliest geometry.

4. a   The author states that management of water was a major challenge in times of unpredictable drought, flood and storm. To deal with problems pertaining to water supplies, the villagers had to build earthworks, dikes, canals etc. which required cooperation among people of several villages. So, the villages shared their human resources for building coordinated network of water-control system. This makes option (a) correct. Option (b) is incorrect as it not mentioned in the passage. Option (c) contradicts the information given in the passage.

5. b   The answer lies in the fifth paragraph, 'Trade expanded surprisingly…away as Iran'. It clearly says that goods were exchanged between linked villages in Egypt and others in Iran, even before the establishment of the first Egyptian dynasty. Hence, (b) is correct.

6. d   The first paragraph says that the riverine lands attracted settlers equipped with the newly developed techniques of agriculture. Further the passage talks about various developments and advancements that happened later all of which (for e.g. methods of measurement and computation) were offshoots of a civilization dependent on agriculture. This makes option (d) correct. Options (a) and (c) are beyond the scope of the passage. Nothing has been mentioned about a symbolic system of writing so option (b) can be eliminated.

7. c   The last paragraph makes a reference to trade developments in India and China and the last line of the paragraph attributes the shaping of the early civilizations to the rivers. So, it can be inferred that by citing examples of India and China, the author wants to lay emphasis on the vital role played by rivers in development of human culture around the world.

Thus, option (c) is correct. Option (a) can be negated because no such comparison has been made in the passage. Option (b) is incorrect because the author hasn't made reference to social systems but to trade developments. Option (d) is inappropriate as the emphasis is on the importance of rivers in history of early civilizations and not on the growth of trade.

8. a   'Askance' refers to a sideways glance. .

9. a   'Virtuoso' is a person with masterly skill or technique in arts. So, option (a) is correct. 'Amateur' is someone who lacks the skill of a professional, as in an art.

10. d   A 'Nuance' is subtle and a 'hint' is an indirect suggestion. 'Pun' is a humorous play on words, it may or may not be sarcastic. 'Fib' is to tell a lie, which is the opposite of being honest. 'Inquiry' and 'discreet' are not related in any way.

11. b   An 'arena' is an area of activity. Just as a 'conflict' may occur in an arena, similarly a 'discussion' is held in a 'forum'. 'Mirage' and 'reality' are antonyms. 'Asylum' and 'pursuit' have no relation. 'Utopia' is an ideally perfect place.

12. c   Just as each element is ranked in a 'hierarchy', similarly each element is sequential in a 'chronology'. An 'equation' is meant to be solved. A 'critique' may or may not be biased. There exists no relation between 'infinity' and 'fixed'.

13. *d   The author brings examples from history to show that these things are happening all over the world and so it can be inferred that Kiebera becoming a shantytown in not unusual. All the options have been mentioned in the passage. Option (a) is mentioned in the third paragraph. The author says that people come to Kiebera to earn but do not find a place to live in. So, they illegally build houses on land which they don't own. Option (b) is mentioned in the third paragraph 'Current projections are…on the planet.' Option (c) is mentioned in the first line of the last paragraph. Hence, (d) is correct.

The question stem is incorrect because it says that the author **argues** about Kiebera being unusual whereas the author **doesn't even mention** that Kiebera is unusual. Kiebera being unusual gets reinforced through the tone of the passage only. The examples cited by the author indicate that squatters are there all over the world, so Kiebera becoming a shantytown is not uncommon.

14. b   In the second paragraph of the passage, the author talks about the prosperity of Kiebera's underground economy and supports it by citing his friend's example (a Kenyan) who used to sell cigarettes and biscuits from the window of his hut for a generation but now owns an empire that includes pharmacies, groceries, bars, manufacturing firms etc. Hence, (b) is correct.

15. *a   Third paragraph talks about the increasing number of squatters in the world. It also states the current projections of rise in number of squatters in the world by 2050. This makes option (a) correct. Option (b) is not mentioned in the passage. Options (c) and (d) talk about a situation that occurred in the past. In addition, they are facts and not thesis.

The question is incorrect because the author talks about a prediction but not a thesis. A thesis is a statement or theory that is put forward as a premise to be maintained or proved whereas a projection is an estimate or forecast of a future situation or trend based on a study of present ones.

16. a   The passage is essentially about the squatters of Kiebera. Also, as per the passage, even though Kiebera is poverty stricken but the lives of squatters in Kiebera is flourishing. So, (a) is correct. Options (b) and (d) can be negated as the name 'Kiebera' has not been mentioned. Only one paragraph talks about the future of squatters but it is not the point of focus. Hence, (d) is inappropriate.

17. c   'Charlatan' is a quack or fraud. A fraud deliberately deceives people. So, charlatan fits appropriately in the given sentence. 'Renegade' is a deserter. A 'sycophant' is a person who uses flattery to win favour from individuals wielding influence. Though flattery may involve deception, but (c) is a better choice.

18. d   The lady is ordering the taxi driver, so 'can't you' is appropriate. 'Won't you' is incorrect as it is polite and doesn't suit the tone of the sentence. 'Will you' is used to seek permission but that is not the case here. 'You must' cannot be used as a question tag. Hence, (d) is correct.

19. b   'Consistent' here shows that there should be some relation between her written statements and what she had said earlier. So, consistent will be followed by 'with'.

20. a   'Facetious' means humorous. 'Serious' is an antonym of humorous.

21. b

22. c   'Writing on the wall' means imminent doom or misfortune. Hence, (c) is correct.

23. b   Since the sentence starts with 'Although', so the two words should be antonyms as 'although' indicates comparison. This rules out options (a) and (c). Option (d) can be negated because people cannot be pleased about the benefits. Using 'pleased' to describe reaction against 'benefits' is inappropriate. Option (b) correctly fits in. 'Optimistic' is positive and 'dubious' pertains to doubtful.

24. b   A 'brook' is a natural stream of water smaller than a river. Similarly a 'path' is a narrower version of a highway. This makes option (b) correct. 'Vein' is a blood vessel that carries blood from the capillaries toward the heart whereas an 'artery' carries blood away from the heart to the cells, tissues and organs of the body. 'Yard' is a tract of ground surrounded by a building or buildings and an 'alley' is a narrow street or passageway between or behind city buildings.

25. b   An 'adverb' modifies a verb or an adjective. Since 'but' does not modify 'smoking' in this sentence, so option (a) can be eliminated. An 'adjective' is a describing word. 'But' does not describe anything in the given sentence. A 'verb' is an action doing word and 'but' is not an action. Hence options (c) and (d) can be eliminated as well. This makes option (b) correct. A 'preposition' is a word that indicates the relationship between a noun or a pronoun and other words in a sentence.

26. a   A colon is used before introducing a list. Quotation marks are used to enclose words that are borrowed or to set off dialog from narrative. Semicolon is used to connect two independent clauses. Hence, (a) is correct.

27. c   '…my brother was one.' The sentence is incorrect because 'one' has been used as a pronoun but the 'noun' (pharmacist) is missing in the sentence. So, it is not clear that what does 'one' refer to. The correct sentence would have been, ' My main reason for learning pharmacy was that my brother was a pharmacist.'

28. a   'Team' as an entity is singular, so using 'their' as a pronoun is incorrect. A singular verb should be used. Hence, I is wrong and II is correct.

29. b   When we use more than one adjective in a sentence, we have to put them in the right order according to the type of adjective. In the adjective order 'size' comes before the 'colour'. In (b), heavy should precede black. The correct sentence will be, 'He carried his clothes in a heavy, black steel trunk.'

30. b   'had been' is a past perfect tense. A past perfect expresses the idea that something occurred before another action in the past. It generally shows that something happened before a specific time in the past. But the given sentence does not have another time reference. So, it is incorrect. The correct sentence is, 'The corpse was dead for five days.' Simple past tense will be appropriate here.

31. c   Option (c) is the odd one because in all the other options there is a possibility that other kings were greater or as great as Ashoka. Only option (c) states that Ashoka was the greatest.

32. c   The grammar rule says: 'With', 'together with', 'accompanied by', or 'as well' do not change the number of the subject. Since the subject 'king' is singular, therefore the verb should be singular as well. The correct sentence will be, 'The king with all his sons was imprisoned.'

33. d   The main sentence is in direct speech and the options are in reported speech. When a direct speech is converted into reported speech, 'will' is changed to 'would'. This makes options (a), (b) and (c) incorrect.

34. a   'A' is correct. 'An' is used before a vowel and 'the' is used for a particular thing.

35. c   As there is only one moon, so 'the' is suitable.

36. b   As the word 'honourable' starts with a vowel sound 'o', so 'an' should be used.

37. d   The sentence requires no article.

38. c   O and M form a mandatory pair. 'they wrote' in statement M refers to the 'letter' in statement O. N and L also form a mandatory pair. 'he' in statement L refers to 'Tom' in statement N. Since only option (c) has these mandatory pairs, so the rest of the options can be eliminated.

39. b   As per the passage, there is an imbalance between the number of members and the number of members accounted for holding balances. In addition, the active membership of the company is just 5 percent. This implies that the company doesn't utilize its resources properly. Hence, (b) is correct. Option (a) is contradictory to the main idea. Options (c) and (d) are beyond the scope of the passage as nothing has been mentioned about the future fund requirements.

40. c The passage states that water has become the new focus area for Bank assistance. The assistance for developing water resources was $700 million in 1999-04 and has increased to $ 3.2 billion in 2005-08. The central idea is the aid that World Bank is giving for developing water resources. Options (a) and (b) just introduce the topic. They are not the major points. Option (d) can be negated because the passage only says that more money is **being spent** on water management in rural areas. But it cannot be implied that poor states **require** water resource management. The passage is silent on that. Hence, (c) is correct.

41. c	42. b	43. b	44. a	45. a	46. b
47. c	48. c	49. a	50. d	51. c	52. d
53. d	54. c	55. a	56. a	57. b	58. c
59. b	60. c	61. d	62. b	63. b	64. d
65. b	66. d	67. a	68. c	69. d	70. c
71. a	72. b	73. d	74. a	75. b	76. c
77. d	78. c	79. b	80. c		

81. b Nalini's brother is directly across the net from her daughter. Therefore, positions of Nalini and her son are shown in the following two cases:

Case I:

| Nalini's brother | Nalini's daughter |
| Nalini's son | Nalini |

In this case, Nalini's son is the worst player. Therefore, Nalini's brother is the best player.

Case II:

| Nalini's brother | Nalini's daughter |
| Nalini | Nalini's son |

In this case, Nalini is the worst player. Therefore, Nalini's brother is the best player.
Hence, in both the cases, Nalini's brother is the best player.

82. c Code pattern is shown below:
$P + 1 \rightarrow Q$
$R + 1 \rightarrow S$
$O + 1 \rightarrow P$

```
M
O
T   ────────▶ 89
I
O
N
```

Therefore, code of 'DEMOTION' in the same code language will be 'EF89'.

83. b The first player retains the right half i.e.,
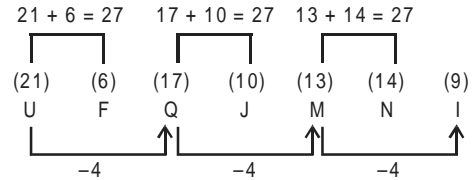
5	1
4	7
9	5
2	4

Then, the second player should retain the upper half, in order to minimize first player's gain.

| 5 | 1 |
| 4 | 7 |

Again the first player will retain the right half, then the second player will retain the upper half.

84. a The series is moving as shown below:

21 + 6 = 27   17 + 10 = 27   13 + 14 = 27

(21) (6)   (17) (10)   (13) (14)   (9)
 U   F   Q   J   M   N   I

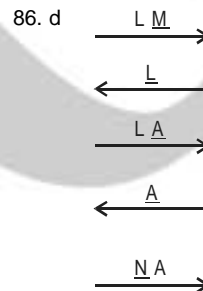−4   −4   −4

Hence, the next letter is I.

85. b Numbers from 1 to 60 (both inclusive) divisible by 6 are 6, 12, 18, 24, 30, 36, 42, 48, 54 and 60
i.e., 10 such numbers.
Numbers from 1 to 60 (both inclusive) in which 6 as one of the digits are 6, 16, 26, 36, 46, 56 and 60
i.e., 7 such numbers in which 3 numbers are common with above 10 numbers.
Numbers from 1 to 60 (both inclusive) whose sum of the digits is 6 are 6, 15, 24, 33, 42, 51 and 60
i.e., 7 such numbers in which 4 numbers are common with above 10 numbers.
Therefore, total number of numbers 'connected by 6'
= 10 + 4 + 3 = 17.
Hence, number of integers not connected with 6
= 60 − 17 = 43.

86. d
```
   L M
  ────────▶

   L
  ◀────────

   L A
  ────────▶

   A
  ◀────────

   N A
  ────────▶
```

Leena will paddle only when she will be alone, it means that she was in the canoe in 3 trips and Nitin was not with her in any of her trips. Therefore, Arun and Mohan were with Leena in two trips. As each person has to paddle continuously for at least one trip, therefore, in the fourth trip, i.e., return trip, Arun must have returned because in the fifth trip Nitin paddle the canoe.
Hence, Arun will paddle twice.

NOTE: Order of the journey can vary but five combinations of person(s) for all of the five trips will remain same.

87. d As B is married to D and G is their child, therefore, E is married to A and the couple have two children, i.e. C and F. Out of the three children C, F and G, only F and G are girls, therefore, C is a boy.
Hence, C is the son of A.

88. c July is the first month of second half of a year.
j and l are at even places, while U and Y are at odd places in English alphabets.
Hence, required month will be written as july.

89. d   Let the merchant divided the coins in two unequal numbers x and y such that x is greater than y.
Then, according to the question,

$$48(x - y) = x^2 - y^2$$

$$\Rightarrow 48(x - y) = (x + y)(x - y)$$

$$\Rightarrow (x - y)(x + y - 48) = 0$$

As $x \neq y$, $x + y = 48$.
Hence, the merchant had 48 coins.

90. a   As his income becomes double on every subsequent day, therefore, his income on the 10th day
$= 1 \times 2^9 = $ Rs. 2^9.

91. b   **Option (a):** If total number of apples is 67, then remaining number of apples after first boy stole the

apples $= \dfrac{2(67 - 1)}{3} = 44.$

Remaining number of apples after second boy

$= \dfrac{2(44 - 1)}{3} = 28.67,$ which is not possible.

Option (b): If total number of apples is 79, then remaining

number of apples after first boy $= \dfrac{2(79 - 1)}{3} = 52.$

Remaining number of apples after second boy

$= \dfrac{2(52 - 1)}{3} = 34.$

Remaining number of apples after third boy $= \dfrac{2(34 - 1)}{3} = 22.$

As $22 - 1 = 21 = 3 \times 7.$
Hence, option (b) is true.

92. c   All 'chilli' are 'vegetables', but 'salt' belongs to a different class.

93. d   'Students of Law' can be or cannot be 'men', similarly 'students of Science' can be or cannot be 'men'.

94. d   INPUT: 09 25 16 30 32 18 17 06
Step I: 32 09 25 16 30 18 17 06
Step II: 32 30 09 25 16 18 17 06
Step III: 32 30 25 09 16 18 17 06

95. a   INPUT: 16 09 25 27 06 05
Step I: 27 16 09 25 06 05
Step II: 27 25 16 09 06 05
Hence, step II is the last step of the given input.

96. a   INPUT: 25 08 35 11 88 67 23
Step I: 88 25 08 35 11 67 23
Step II: 88 67 25 08 35 11 23
Step III: 88 67 35 25 08 11 23
Step IV: 88 67 35 25 23 08 11
Step V: 88 67 35 25 23 11 08
Hence, required output is given in option (a).

97. d   INPUT: 03 31 43 22 11 09
Step I: 43 03 31 22 11 09
Step II: 43 31 03 22 11 09
Step III: 43 31 22 03 11 09
Step IV: 43 31 22 11 03 09
Step V: 43 31 22 11 09 03
Hence, step V is the last step of the given input.

98. *   When output of any step is given we cannot determine the output of prior steps or Inputs.
Example: If output of Step II is given, then we cannot determine the Input.
Therefore, answer should be cannot be determined.
Hence, none of the options is true.

99. c   'A' is mother of 'B' and 'B' is father of 'C' and 'D'.
Hence, 'A' is grandmother of 'C'.

100. b   **Option (a):** 'A' is the brother of 'B', therefore 'A' is a male.
Option (b): 'A' is the sister of 'B', 'B' is father of 'C', 'D' and 'E'.
Hence, 'A' is the aunt of 'E'.

101. c   **Option (a):** 31 + 10 + 19 + 6 = 66%
Option (b): 31 + 10 + 19 + 8 + 6 = 74%
Option (c): 31 + 21 + 10 + 19 = 81%
Option (d): 31 + 21 + 19 + 8 = 79%
Hence, the correct set of sectors is given in option (c).

102. c   Let the average profit across the remaining sectors be x %.
Then, $100 \times 10 = 31 \times 12 + 19 \times 20 + 50 \times x$

$$\Rightarrow x = \dfrac{1000 - 372 - 380}{50} = \dfrac{248}{50} = 4.96$$

Hence, the average profit across the remaining sectors is 4.94%.

103. b   As the mean temperature of Monday to Wednesday was 37 and the mean temperature of Tuesday to Thursday was 34, difference of the temperature between Monday and Thursday was 9 degree Celsius.
From statement I: The temperature on Thursday = 36 degree Celsius.
From statement II: The temperature on Thursday = 36 degree Celsius.
From statement III: We cannot find the temperature on Thursday.
Hence, either statement I or II is sufficient to find the answer.

104. *   In statement I, only difference between the two number is given, and in statements II and III, ratios of the two number is given, so question cannot be answered by using individual statement.
Hence, the question can be answerd either by combining I and II or I and III.

105. *   **We can find the answer by using any of the two statements taken together.**

106. b   From statement I: We can only conclude that rate of interest is a simple interest.
From statement II: We can find the sum after five years.
From statement III: We can find the rate of simple interest.
Hence, by using both the statements II and III, we can find the principal sum.

107. c   Required average share price

$$= \dfrac{483 + 475 + 461 + 513}{4} = 483$$

108. *   Approximate drop in share price of Toya Motors during

October 2005 $= \dfrac{535 - 461}{535} \times 100 \approx 14\%$

Hence, **none of the options is true.**

109. * It is not clear from the graph that how many times the share prices have dropped but going by the table we can find it as mentioned below.
Number of times during the given 3-month period the share price of Toya Motors had dropped = 4 times (10/8 → 22/8, 22/8 → 31/8, 10/10 → 20/10 and 20/10 → 31/10).
Hence, **none of the options is true.**

110. a Required gain = 538 × 100 − 461 × 100 = Rs. 7700.

111. d Data given from statement I: We cannot determine the age of B.
From statement II: We cannot determine the age of B.
Using both statements I and II: Still we cannot determine the age of B.

112. * Information in statement I contradicts the main statement.

113. c From statement I: We cannot determine the cost price of the suitcase purchased by Richard.
From statement II: We cannot determine the cost price of the suitcase purchased by Richard.
Using both statements I and II: We can determine the cost price of the suitcase purchased by Richard.

114. c From statement I: we can determine the time taken by A alone to compete the work.
From statement II: we can determine the time taken by C alone to compete the work.
Using both statements I and II: We can determine the time taken by A, B and C together to complete the work.

115. c The single largest contributor to the total agri exports in 2000-01 was Marine Production, which was 23.2%. Therefore, 23.2% of US $ 6 billion = US $ 1.39 billion.

116. c Growth rate of exports of the products during the given 3-year period.
Option (a): For Meat and Meat Preparations
$$= \frac{322 - 187}{187} \times 100 = 72.2\%$$
Option (b): Fruits and Vegetables
$$= \frac{248 - 184}{184} \times 100 = 34.8\%$$
Option (c): Processed Fruits and Vegetables
$$= \frac{122 - 69}{169} \times 100 = 76.8\%$$
Hence, Processed Fruits and Vegetables has shown strong growth.

117. c Share of veg. oils in India's Agricultural Imports in 2000-2001 was is 71.8%, i.e. largest and share of Cashew nuts was 11.3%, i.e. second largest.

118. b From the import data, imports of Cereals and Sugar showed decrease during the given period, hence in absence of production and requirement data of these commodities it can be said that India's demand for these commodities has gone down.

119. b From the given data, it can be seen that the total value of India's agri imports showed decrease in the given period, hence it can be concluded that the concerns raised related to surge of India's agri imports were not justified.

120. d For balancing trade every country wants to increase its export and decrease its imports. Export is the best way to improve export or import balance.

121. b Using the rule of alligation,

$$\frac{4}{7} \qquad \qquad \frac{2}{5}$$
$$\frac{1}{2}$$
$$\left(\frac{1}{2} - \frac{2}{5}\right) = \frac{1}{10} \qquad \left(\frac{4}{7} - \frac{1}{2}\right) = \frac{1}{14}$$

Hence, the ratio = $\frac{1}{10} : \frac{1}{14} = 7 : 5$.

122. d Let the price (in Rs.)of picture or frame be x.
∴ 2(x − 100) = (x + 75)
⇒ x = Rs. 275.

123. b We have,
$$\theta = 30h - \frac{11}{2}m$$
$$\Rightarrow 180° = 30 \times 7 - \frac{11}{2}m$$
$$\Rightarrow m = \frac{60}{11} = 5.5$$
Hence, hands of watch are at an angle of 180° around 7 hr.-5.5 min.

124. a Probability of having 2 tickets of front row
$$= \frac{{}^4C_2 \times {}^2C_1}{{}^6C_3} = 0.6.$$

125. b Let the number be x.
∴ 0.75 × x + 75 = x
$$\Rightarrow x = \frac{75}{0.25} = 300.$$

126. d Let the distance travelled on water be x miles.
According to question,
$$\frac{4x}{7} + x + \frac{2x}{5} = 3036$$
$$\Rightarrow x = \frac{3036 \times 35}{69} = 1540$$
Distance covered on foot $= \frac{4x}{7} = \frac{4 \times 1540}{7} = 880$ miles.

Distance covered on horseback
$$= \frac{2x}{5} = \frac{2 \times 1540}{5} = 616 \text{ miles.}$$

127. c Let the number of girls and boys in the family be x and y respectively.
Since each boy has same number of brothers and sisters
⇒ x − 1 = y   …(i)
Also, each girl has twice as many brothers as sisters.
⇒ 2(y − 1) = x   …(ii)
Solving (i) and (ii), we get x = 4 and y = 3
Therefore, 4 brothers and 3 sisters are there in the family.

128. b Going through the options, probability of picking two white marbles will be maximum when one white marble is kept in one jar and the remaining 99 in the other jar,

i.e. $\frac{1}{2} \times \frac{1}{1} + \frac{1}{2} \times \frac{49}{99} \approx 0.75$.

129. c 196 when turned upside down will look like 961 which is a square of 31.
Hence, option (c) is the correct answer.

130. d Required number of flies = $\frac{5 \times 100 \times 100}{5 \times 5} = 2000$.

131. b Total number of games played = 20 + 2 × 7 = 34.

132. a The ninth, the sixteenth, the twenty fourth and the twenty seventh letters are D, J, Y and V respectively.
No meaninful word can be formed using the four letters.
Hence, option (a) is the correct answer.

133. a $5^{\frac{1}{4}} \times (125)^{0.25}$
$= 5^{0.25} \times (5)^{3 \times 0.25}$
$= 5^{(0.25 + 0.75)} = 5^1 = 5$.

134. c When 1 l of water is poured into pitcher A.
Ratio of wine to water will be 10 : 1.

Therefore, Amount of wine in 1 l of solution of A = $\frac{10}{11}l$

and that of water = $\frac{1}{11}l$.

After second opration amount of wine in A will be

$\left(10 - \frac{10}{11}\right) = \frac{100}{11}l$ and that of water $\frac{10}{11}l$.

And the same in B will be $\frac{10}{11}l$ and $\left(9 + \frac{1}{11}\right)l = \frac{100}{11}l$

respectively.
Hence, option (c) is the correct answer.

135. c Let the amount with Anand, Binoy, Chetan and Dharma be A, B, C and D respectively.
A + B + C + D = 47 … (i)
A + B = 27 … (ii)
C + A = 25 … (iii)
D + A = 23 … (iv)
Solving (i), (ii), (iii) and (iv), we get
A = Rs. 14, B = Rs. 13, C = Rs. 11 and D = Rs. 9.

136. b Distance between 11th floor and 51st floor = 51 − 11 = 40
Also, Relative speed of two elevators (57 + 63) = 120 floors per minute

∴ Time taken = $\frac{40}{120} = \frac{1}{3}$ min = 20 sec.

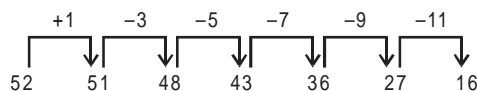∴ Distance travelled by 1st elevator in 20 sec

= $\frac{57}{3} = 19$ floors

Hence, the elevators will meet at = 11 + 19 = 30th floor.

137. b As average of the 5 consecutive numbers is n, the five numbers will be (n − 2), (n − 1), n, (n + 1) and (n + 2).
When next two numbers are also taken, then the 7 numbers will be (n − 2), (n − 1), n, (n + 1), (n + 2), (n + 3) and (n + 4) and their average will be middle number, i.e. (n + 1).
Therefore, average will increase by 1.

138. b In the given sequence, a term is obtained by subtracting consecutive odd natural numbers starting from 1 from the preceding term.
Here, 36 should come in place of 34.
Hence, option (b) is the correct answer.

139. c Let Q is Rs. 100, thus P will be Rs. 600.
∴ Percentage by which Q less than P

= $\frac{(600 - 100)}{600} \times 100 = \frac{250}{3} = 83\frac{1}{3}\%$.

140. b Here, 32 − 10 = 22, 40 − 18 = 22 and 72 − 50 = 22.
∴ Required number of pebbles in the heap
= L.C.M. of (32, 40, 72) − 22
= 1440 − 22 = 1418.

141. b In the problem, the common terms of the series S_1 and S_2 will form an arithmetic progression 6, 12, 18, …., 198.
∴ Total number of terms

= $\frac{198 - 6}{6} + 1 = \frac{192}{6} = 33$

Hence, 33 terms would be identical in both the series S_1 and S_2.

142. b Let the number of cows, horses and chikens purchased be x, y and z respectively.
x + y + z = 100 ...(1)
and 1000x + 300y + 50z = 10000 ...(2)
From (1) and (2), we get x = 5, y =1 and z = 94
Hence, option (b) is the correct answer.

143. c Here, $1 - 2^3 - 3^3 + 1 + 4^3 = 31$

Hence, option (c) is the correct answer.

144. a Number of participants = $\frac{\text{Total takings}}{\text{Participant fee}}$

Here, $\frac{38950}{410} = 95$, which is an integer lying between 45 and 100.
Hence, option (a) is the correct answer.

145. b In the given sequence, each term from third term onwards is product of two preceding terms.
Therefore, 36 × 216 = 7776 will complete the series.

146. b Let the amount paid by Tanya be x.

Amount paid by Veena = $\frac{x}{2}$

Amount paid by Amita = $\frac{2}{3} \times \frac{x}{2} = \frac{x}{3}$

Total bill = $x + \frac{x}{2} + \frac{x}{3} = \frac{11x}{6}$

∴ Part of the bill paid by Veena = $\frac{x/2}{11x/6} = \frac{3}{11}$.

147. c To find winner of the event, 127 players need to be eliminated and also each match eliminates one player.
∴ Number of matches played = 128 − 1 =127.

148. b Let the speed of the crew in still water be x mph and speed of stream be y mph.

$$\therefore \text{ Speed downstream} = x + y = \frac{10}{\frac{5}{6}} = 12\,\text{mph}$$

and Speed upstream $= x - y = \dfrac{12}{\frac{90}{60}} = 8\,\text{mph}$

Therefore,
x + y = 12   … (i)
x − y = 8   … (ii)
Solving (i) and (ii), we get x = 10 mph and y = 2 mph.

149. b From Swamy's answer, it is quite clear that at least one of his children is a girl.
So possible combinations are (GG), (B,G) and (G,B).

$$\therefore \text{ Probability of having two girls } = \frac{1}{3}.$$

150. c Let the distance between the house and the school be x.

$$\therefore \frac{12}{60} = \frac{x}{5/2} - \frac{x}{7/2} \Rightarrow x = 1\frac{3}{4}\,\text{km}.$$

151. b The series is consisted of consecutive prime numbers starting from 1973.
Hence, the next term in the series will be 2003.

152. a The ratio = 4 × 1.5 : 3 × 1.25 : 5 × 1.1

$$= 6 : \frac{15}{4} : \frac{11}{2} = 24 : 15 : 22.$$

153. a Since the man earns Rs.20 on the first day and spends Rs.15 on the second day, in first 2 days he collects
= 20 − 15 = Rs.5
∴ Amount collected in 16 days = 5 × 8 = Rs.40
As on 17th day he earns Rs.20, he will have Rs.60 at the end of the day.

154. c The time duration $= \dfrac{11 \times 90}{15} = 66$ min.

155. b Ratio of investments of A, B and C
= (20000 × 5 + 15000 × 7) : (20000 × 5 + 16000 × 7) : (20000 × 5 + 26000 × 7)
= 205 : 212 : 282

$$\therefore \text{ B's share } = \frac{212}{(205 + 212 + 282)} \times 69900$$

$$= \frac{212}{699} \times 69900 = \text{Rs.}21200.$$

156. c Birth rate $= \dfrac{32}{1000} \times 100 = 3.2\%$
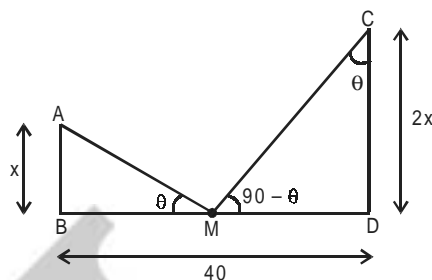
Death rate $= \dfrac{11}{1000} \times 100 = 1.1\%$

∴ Percentage increase in population = 3.2 − 1.1 = 2.1%

157. c Let the smaller number be x. Thus, the larger number will be x + 1365.
∴ x + 1365 = 6x + 15

$$\Rightarrow x = \frac{1365 - 15}{5} = \frac{1350}{5} = 270\,.$$

158. a

Let AB and CD be the two poles and M be the mid point of BD.

In △ABM, $\tan\theta = \dfrac{AB}{BM} = \dfrac{x}{20}$ ...(i)

In △CMD, $\tan\theta = \dfrac{20}{2x}$
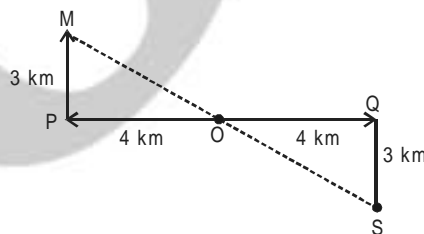
$$\Rightarrow \tan\theta = \frac{10}{x} \qquad \text{...(ii)}$$

From (i) and (ii), we have

$x = 10\sqrt{2} = 14.14$ m

∴ Heights of poles are 14.14 m and 28.28 m.

159. a

Let O be the starting point, and M and S be the final positions of Meera and Sameera.
Therefore, MS = OM + OS.

$$= \sqrt{OP^2 + PM^2} + \sqrt{OQ^2 + OS^2}$$

$$= \sqrt{3^2 + 4^2} + \sqrt{3^2 + 4^2} = 5 + 5 = 10\,\text{km}.$$

160. b Let the number to be multiplied be x.
∴ 53x − 35x = 1206

$$\Rightarrow x = \frac{1206}{18} = 67.$$