SBI PO Preliminary Grand Test –SPP-180538

HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

1. (1)   2. (2)
3. (3)   4. (5)   5. (4)
6. (1)   7. (2)
8. (2)   9. (5)   10. (4)
11. (5) **Concerted (Adjective)** = done in a planned and determined way ; strong.
Weak (Adjective) = without enthusiasm, not strong; not good at something
Look at the sentence :
She has begun to make a concerted effort to find a job.
12. (4) **Robust (Adjective)** = strong; sturdy; vigorous.
Flimsy (Adjective) = not strong enough; rickety.
13. (1) **Unexploited (Adjective)** = untapped; available but not yet used.
Look at the sentence :
The government is making efforts to tap the unexploited reserves of oil.
14. (2)   15. (3)
16. (2) **Underpin (Verb)** = to support or form the basis of an argument, a claim etc.
Look at the sentence :
The report is underpinned by extensive research.
17. (4)

18. (2) **Albatross** = a thing that causes problems or prevents you from doing something
19. (2)   20. (5)
21. (2)   22. (3)
23. (1)   24. (2)   25. (3)
26. (5) No correction required
27. (4) Whatever the reasons
28. (2) like being transported
29. (4) have paid little heed
30. (1) cannot wish away
31. (3) S, N, M referred for Sangeeta, Namrata & Mandip
Let OK = x m ⇒ KN = $5 - x$ m
In ∆OSK
SK² = OS² - OK²
$\quad = 5^2 - x^2$ ....(1)
In ∆SNK
SK² = 6² - (5 - x)² ....(2)
∴ From (1) & (2)
$5^2 - x^2 = 6^2 - (5 - x)^2$
$\Rightarrow 25 - x^2 = 36 - 25 + 10x - x^2$
$\Rightarrow 25 - 11 = 10x$
$\Rightarrow x = \frac{14}{10} = \frac{7}{5}$
∴ SK = $\sqrt{25 - \frac{49}{25}}$
$= \sqrt{\frac{625 - 49}{25}} = \frac{24}{5}$ m = 4.8 m
So, distance between Sangeeta and Mandip
= 4.8 × 2 = 9.6m
32. (3) Number of students who passed in one or more subjects. = 11+9+13+16+26+24+7=106
Number of students who failed in all the subjects =115–106= 9
33. (1) Let the side of longer square = a unit
Side of smaller square = m unit
ATQ,
$\quad$ 4a-4m=100
$\quad$ a – m = 25   ....(i)
Again from question:
$a^2 - 3m^2 = 325$ ....(ii)
From (i) and (ii) :-
m = 30, -5, a = 55, 20
(side cannot be negative)
∴m = 30
34. (1) Let the total number of candidates = x
5 questions = $\frac{5x}{100}$
Also, Number of candidates who answered not a single question = $\frac{5x}{100}$
∴ Remaining students = $x - \left(\frac{5x}{100} + \frac{5x}{100}\right) = \frac{9x}{10}$
⇒ Number of candidates who answered only one question = $\frac{9x}{10} \times \frac{25}{100} = \frac{9x}{40}$
Number of candidates who answered four questions = $\frac{9x}{10} \times \frac{20}{100} = \frac{9x}{50}$
Given, number of candidates who answered either two questions or three question=396
$\Rightarrow x - \left(\frac{5x}{100} + \frac{5x}{100} + \frac{9x}{40} + \frac{9x}{50}\right) = 396$
$\Rightarrow x - \left(\frac{10 + 10 + 45 + 36}{200}\right)x = 396$
$\Rightarrow x \left(\frac{200 - 101}{200}\right) = 396$
$\Rightarrow x = \frac{396 \times 200}{99} = 800$

35. (2) Ratio of total capital of A and B
$$= 20000 \times 12 : 35000 \times 12$$
$$= 240000 : 420000$$
Now C gives 220000 to both to make the capital equal.
∴ A's capital : B's capital
$$= 240000 : 420000$$
$$-220000 : 220000$$
$$\underline{20000 : 200000}$$
∴ Required ratio of divided amount = 1 : 10

36. (4) From II, Ratio of time (walking) 1 = 30 min,
Time taken by Rahul (walking) = 4 X 30 = 120 min
Now, from I, since speed of Rahul's car is double the walking speed,
Hence time taken by Rahul to reach the destination
by car = 120/2 = 60 min
So, both the statements are necessary.

37. (3) Either statement is sufficient

38. (3) Either of the statements gives the answer but the answer
are different.
In statement I, answer is 'C', while in II it is 'B'.

39. (3) From I, any number ending in 9 will have this property.
From II, numeric value of 'x' would be 19, so unitary digit of 'x' is 9.

40. (4) Who starts the work, Deepak and Vivek is not given.

41. (3) Total no. of females placed from University B in 2015
$$= 42500 \times \frac{12}{100} \times \frac{10}{17} = 3000$$
Total no. of males placed from University C in 2015
$$= 42500 \times \frac{17}{100} \times \frac{12}{17} = 5100$$
Required % $= \dfrac{3000}{5100} \times 100 = 58.8\%.$

42. (3) Total no. of females placed from D in both years
In 2015 $= 42500 \times \dfrac{18}{100} \times \dfrac{13}{25} = 3978$
In 2016 $= 44000 \times \dfrac{24}{100} \times \dfrac{2}{3} = 7040$
Total female from D in both years = 11018.
Total females placed from E in both years
In 2015 $= 42500 \times \dfrac{22}{100} \times \dfrac{1}{5} = 1870$
In 2016 $= 44000 \times \dfrac{16}{100} \times \dfrac{1}{5} = 1408$
Total female from E in both years = 3278.
Required difference = 11018 − 3278 = 7740.

43. (4) No. of male students from F in 2015
$$= 42500 \times \frac{10}{100} \times \frac{2}{5} = 1700$$
No. of male students from C in 2015
$$= 42500 \times \frac{17}{100} \times \frac{12}{17} = 5100$$
Required Ratio = 1700 : 5100 = 1 : 3.

44. (2) Total no. of placed students from all universities except D in 2015
$$= \frac{42500}{100}(21+12+17+22+10) = 425(82) = 34850.$$
Average $= \dfrac{34850}{5} = 6970.$

45. (3) Female students placed from E in 2015

$$= 42500 \times \frac{22}{100} \times \frac{1}{5} = 1870$$
Female students placed from A in 2016
$$= 44000 \times \frac{15}{100} \times \frac{1}{3} = 2200.$$
Required % $= \dfrac{2200-1870}{2200} \times 100 = \dfrac{330}{22} = 15\%.$

46. (1) Total sales revenue
= Rs. (660 + 720 + 760 + 860 + 800 + 640) laKhs
= Rs. 4440 lakhs
Required average $= \dfrac{4440}{6}$
= Rs. 740 laKhs

47. (4) Profit per cent of company: Year 2004
$$\Rightarrow \frac{640 - (420+180)}{(420+180)} \times 100$$
$$= \frac{640-600}{600} \times 100 = \frac{20}{3}$$
Year 2005
$$\Rightarrow \frac{860 - (520+180)}{(520+180)} \times 100$$
$$= \frac{860-700}{700} \times 100 = \frac{160}{7}$$
Required ratio $= \dfrac{20}{3} : \dfrac{160}{7}$
= 7 : 24

48. (1) Profit of company :
Year 2001 $\Rightarrow$ 660 - (320 + 100)
= 660 - 420 = Rs. 240 lakh
Year 2002 $\Rightarrow$ 720 - (440 + 120)
= 720 - 560 = Rs. 160 lakh
Required per cent
$$= \frac{240-160}{240} \times 100 = \frac{100}{3} = 33\frac{1}{3}\%$$

49. (2) Total expenditure on raw materials
= Rs. (320 + 440 + 520 + 420 + 520 + 480) lakhs
= Rs. 2700 lakhs
∴ Required average $= \dfrac{2700}{6}$
= 450 lakhs

50. (2) Required per cent
$$= \frac{160-120}{120} \times 100 = \frac{40}{120} \times 100 = \frac{100}{3} = 33\frac{1}{3}\%$$

51. (2) Let the speed of boat in still water be u km/hr and speed of the current be v km/hr.
Rate downstream = (u + v) km/hr,
Rate upstream = (u − v)km/hr.
Let the distance covered in each case x km. Then,
$$\frac{2x}{(u+v)} = \frac{x}{u-v}$$
$$\Rightarrow 2(u-v) = (u+v) \Rightarrow u = 3v$$
$$\Rightarrow \frac{u}{v} = \frac{3}{1}$$

52. (5) Let speed of boat B = x km/h and speed of boat A = (x − 2) km/h
Therefore speed of current $= \left(\dfrac{x-2}{3}\right)$ km/h

Now according to the question

$$\frac{20}{(x-2)+\frac{(x-2)}{3}}=\frac{20}{x+\frac{x-2}{3}}+\frac{30}{60}$$

$$\frac{20\times3}{3x-6+x-2}=\frac{20\times3}{3x+x-2}+\frac{1}{2}$$

$$\frac{60}{4x-8}=\frac{60}{4x-2}=\frac{1}{2}$$

$$\frac{15}{x-2}-\frac{30}{2x-1}=\frac{1}{2}$$

$$\frac{30x-15-30x+60}{(x-2)(2x-1)}=\frac{1}{2}$$

$$\frac{45}{(x-2)(2x-1)}=\frac{1}{2}$$

$$(x-2)(2x-1)=90$$

$$\Rightarrow 2x^2-x-4x+2=90$$

$$\Rightarrow 2x^2-5x-88=0$$

$$\Rightarrow 2x^2-16x+11x-88=0$$

$$\Rightarrow x=8,-\frac{11}{2}\left[x\neq-\frac{11}{2}\right]$$

Speed of boat = 8 km/h

53. (3)　Let Ravi Speed = x
　　　　Ajay speed = x + 4
　　　　Distance covered by Ajay= 60 + 12 = 72
　　　　Distance covered by Ravi = 60 − 12 = 48
　　　　According to question,
$$\frac{72}{x+4}=\frac{48}{x}\Rightarrow x=8\text{ km/hr.}$$

54. (3)　Milk in First vessel = $\frac{5}{8}$

　　　　Milk in second vessel = $\frac{2}{5}$

　　　　Milk in resultant mixture = $\frac{1}{2}$
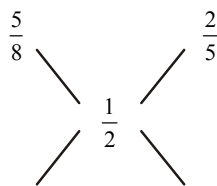
$$\frac{5}{8}\qquad\qquad\frac{2}{5}$$
$$\frac{1}{2}$$
$$\frac{1}{2}-\frac{2}{5}=\frac{1}{10}\qquad\frac{5}{8}-\frac{1}{2}=\frac{1}{8}$$

　　　　Required ratio = 4 : 5.

55. (1)　A can complete the work in 3 × 30 = 90 hrs.
　　　　B can complete the work in 4 × 18 = 72 hrs.

$$(A+B)\text{'s 1 hour work}=\frac{1}{72}+\frac{1}{90}=\frac{5+4}{360}=\frac{9}{360}=\frac{1}{40}$$

　　　　So, (A + B) can complete the work in 40 hours.
　　　　As they work 10 hours every day, they will complete the

　　　　work in $\frac{40}{10}=4$ days

56. (1)　The pattern is :
　　　　6 x 3 - 3 = 18 - 3 = 15
　　　　15 x 3-3 = 45-3 = 42 ≠ 46
　　　　42 x 3 - 3 = 126 - 3 = 123
　　　　123 x 3 - 3 = 369 - 3 = 366
　　　　366 x 3 - 3 = 1098 - 3 = 1095

57. (4)　The pattern is :
　　　　8 x 2 + 8 = 16 + 8 = 24
　　　　24 x 2 + 8 = 48 + 8 = 56
　　　　56 x 2 + 8 = 112 + 8 = 120
　　　　120 x 2 + 8 = 240 + 8 = 248
　　　　≠ 348
　　　　248 x 2 + 8 = 496 + 8 = 504
　　　　504 x 2 + 8 = 1008 + 8 = 1016

58. (2)　The pattern is :
　　　　138 + 1^2 = 138 + 1 = 139
　　　　139 + 2^2 = 139 + 4 = 143
　　　　≠ 145
　　　　143 + 3^2 = 143 + 9 = 152
　　　　152 + 4^2 = 152+ 16= 168
　　　　168 + 5^2 = 168 + 25 = 193
　　　　193 + 6^2 = 193 + 36 = 229

59. (5)　The pattern is :
　　　　0.5 x 1+ 10 = 0.5 + 10 = 10.5
　　　　10.5 x 2 + 10 = 21 + 10 = 31
　　　　31 x 3 + 10 = 93 + 10 = 103
　　　　103 x 4 + 10 = 412 + 10 = 422
　　　　422 x 5 + 10 = 2110 + 10
　　　　= 2120 ≠ 2220
　　　　2120 x 6 + 10 = 12720 + 10 = 12730

60. (2)　The pattern is :
$$\frac{477-3}{2}=\frac{474}{2}=237\neq\boxed{227}$$
$$\frac{237-3}{2}=\frac{234}{2}=117$$
$$\frac{117-3}{2}=\frac{114}{2}=57$$
$$\frac{57-3}{2}=\frac{54}{2}=27$$
$$\frac{27-3}{2}=\frac{24}{2}=12$$

61.(2)　　　　　　　　　　　62.(2)
63.(1)　　　　　　　　　　　64.(4)　　　　　　　65.(5)

66. (2)　The machine first rearranges words which are along with numbers
　　　　according to the ascending order of sum of the digits of the numbers.
　　　　And then remaining words are arranged in descending order of the length of words.
　　　　In case words are of equal length, then they are arranged in reverse alphabetical order.
　　　　In the last step, except the words that are along with numbers,
　　　　the place value of the first letter of the words is written in the place of words in alphabet.
　　　　Input: garden heat 36 in 28 below normal in 23 over
　　　　Step I: in 23 garden heat 36 in 28 below normal over
　　　　Step II: in 23 heat 36 garden in 28 below normal over
　　　　Step III: in 23 heat 36 in 28 garden below normal over
　　　　Step IV: in 23 heat 36 in 28 normal garden below over
　　　　Step V: in 23 heat 36 in 28 14 7 2 15

67. (1)　Step III
68. (4)　normal
69. (1)　Step IV
70. (2)　normal

71 – 75:

| Floor	Person	Game
8	A	Roadrash
7	E	Castlevania
6	H	Resident Evil
5	C	Dragon Quest
4	G	Tekken 3
3	F	Contra
2	B	San Andreas
1	D	Metal Gear

71. (4) D plays the game of Metal Gear.
72. (2) G himself plays Tekken 3.
73. (5) G plays Tekken 3.
C lives immediately below the one who plays Resident Evil.
B lives immediately above D.
74. (3) E and H live between A and C (Dragon Quest).
75. (1) There are four persons between A and F, who likes Contra. There are only two persons B and who likes Dragon Quest. Similarly, there are two persons between C-Roadrash.
H is immediately below the person who likes Castlevania. Similarly, F lives immediately below the person who likes Tekken 3.

76-80.

Sushant   Abishek   Nandita   Shalini   Nidhi

Manish   Rohit   Apurva   Rahul   Kriti
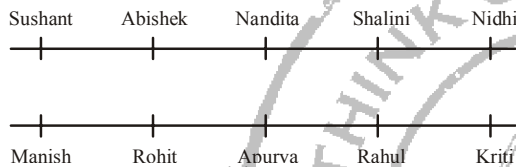
76. (3) 77. (5)
78. (4) 79. (5) 80. (2)
81. (4) I. $B < L = P \le W < V$ (TRUE)
II. $M = K \ge V > W \ge P$ (TRUE)
82. (5) I. $L = P \le W < V \le K \ge Q$ (FALSE)
II. $W < V \le K = M$ (FALSE)
83. (3) I. $X \ge B = U \ge R$ (FALSE)
II. $X \ge B = U \ge R$ (FALSE)
84. (2) I. $U \le S < T = O > D$ (FALSE)
II. $S < T = O \le P$ (TRUE)
85. (1) I. $Z = O > D \ge Y$ (TRUE)
II. $C > U \le S < T = O$ (FALSE)

(86 – 90)
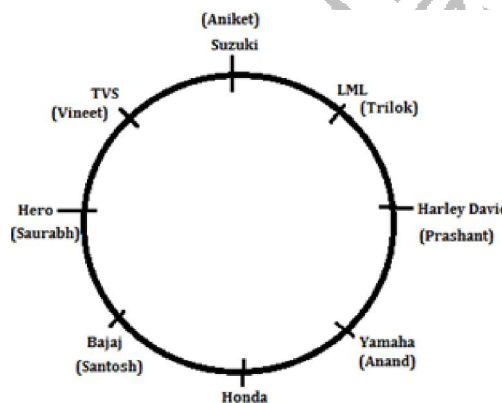
86. (1) Trilok
87. (3) Three
88. (2) Harley Davidson
89. (4) Prashant
90. (5) All are true
91. (5) From the plan formulated by XYZ government, it is clear that XYZ government seems serious about actual development. The government must be assuming I and II both. Hence, both I and II are implicit.
92. (4) I is not implicit because of the word 'only'. Again, the request made by the company to buyers, sellers, and landlords, implies that the company assumes that such

people may prefer the company's involvement in their dealings. II goes against this assumption of the company. Hence II is not implicit.
93. (4) The course of action taken by the authorities implies that they assume that the action taken by them may help to deter crime. But we don't know the relationship assume in this. Hence, I and II are not implicit.
94. (5) Why did the need to issue such an instruction arise? The government must be assuming II. Hence II is implicit. The motive of the government can't be fulfilled without I. Hence, I is implicit.
95. (1) I is obvious from the advice. Hence I is implicit. II may or may not be an assumption, because the advice can be given even if the government finds itself fully prepared to face the situation.
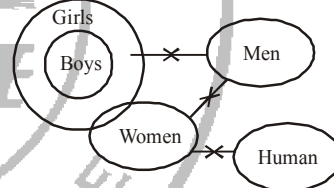
96. (3)
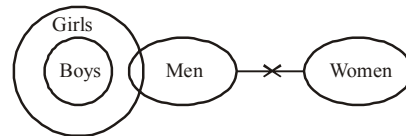
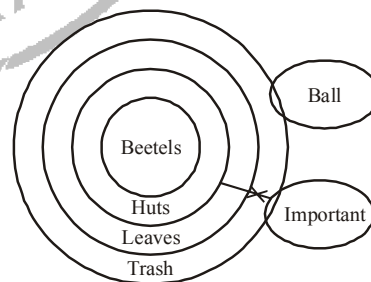
(i) ✓ (ii) ✓ (iii) ✗
Only (i) and (ii) follows.
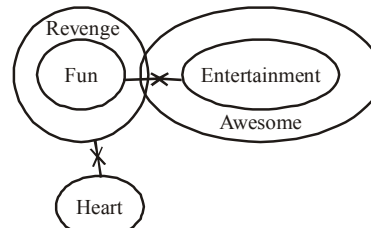
97. (4)
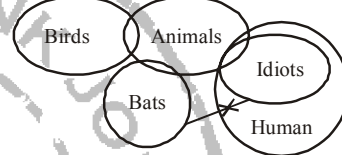
(i) ✓ (ii) ✓ (iii) ✓
All follows.

98. (4)

(i) ✓ (ii) ✓ (iii) ✓
All follows.

99. (1)

(i) ✓ (ii) ✗ (iii) ✗
Only (i) follows.

100. (5)

None of these.