

SBI PO Preliminary Grand Test –SPP-180309

HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

1. (5) None of these
2. (5) Not getting enough financial assistance
3. (2) All (A), (B) and (C)
4. (3) carrying out research in the area of their interest
5. (1) UGC wants teachers to spend minimum 40 hours in a week in teaching
6. (5) decreased by 1%
7. (4) Public investment in higher education has increased in India.
8. (2) halt
9. (3) Do not appoint any permanent teacher.
10. (1) continuous
11. (4) The event shows past time. Hence, when he reached the office/when he had reached the office should be used.
12. (2) The event shows past time. Hence, Past Perfect should be used. Hence, had brought a much unnerving gloom should be used.
13. (3) The word threat should be followed by 'to' here. Hence, serious threats to residents should be used.
14. (3) The form of an Infinitive is : to + V₁. Hence, to regulate the process of should be used.

15. (2) Here, use of double superlatives is superfluous. Hence, India's fastest growing bird sanctuary should be used.
16. (2) parameters 17. (5) endowment
18. (4) themselves 19. (2) causes
20. (2) with
21. (3) Period of time is evident Hence, Present Perfect Continuous i.e. has been arguably should be used.
22. (3) Look at the structure:
must + be + Adjective
must + be + Verb.
23. (5)
24. (4) Infinitive = to + V₁
Hence, is set to double should be used here.
25. (4) Here, has the potential (Noun)should be used.
Look at the sentences:
First we need to identify actual and potential (Adjective) problems.
The European market place offers excellent potential for increasing sales.
26. (1) G 27. (4) D
28. (3) E 29. (5) C
30. (2) F
31. (1) If the length of train A be x metre, then length of train B = 2x metre.
When a train crosses a pole, it covers a distance equal to its own length.
 \therefore Required ratio = $\frac{x}{25} : \frac{2x}{75} = \frac{1}{25} \times 75 : \frac{2}{75} \times 75 = 3 : 2$
32. (2) \therefore 12 kg of apples = Rs. 1500
 \therefore 20 kg of apples = $\frac{1500}{12} \times 20 =$ Rs. 2500
 \therefore 10 kg of nuts = Rs. 2500
 \therefore 34 kg of nuts = $\frac{2500}{10} \times 34 =$ Rs. 8500
 \therefore Veena's monthly income = Rs. 8500
 \therefore Veena's annual income = Rs. (12 \times 8500) = Rs. 1 lac 2 thousand
33. (3) If the number of 2-rupee coins be x, then number of 5 rupee coins = x- 5
 $\therefore 2x + 5(x-5) = 50 - 26 \Rightarrow 2x + 5x - 25 = 24$
 $\Rightarrow 7x = 24 + 25 = 49 \Rightarrow x = \frac{49}{7} = 7$
34. (4) If the maximum marks in the test be x, then
 $\frac{x \times 35}{100} = 175 + 35 = 210 \Rightarrow x = \frac{210 \times 100}{35} = 600$
35. (2) Area of the square = 22 \times 22 = 484 sq.cm
 \therefore Circumference of circle = 484 cm
 $\pi \times$ Diameter = 484
 $\Rightarrow \frac{22}{7} \times$ Diameter = 484

$$\therefore \text{Diameter} = \frac{484}{22} \times 7 = 154 \text{ cm}$$

$$\therefore \text{Length of rectangle} = 2 \times 154 = 308 \text{ cm.}$$

$$\therefore 2 (\text{length} + \text{breadth}) = \text{Perimeter of rectangle}$$

$$\Rightarrow 2 (308 + x) = 668$$

[Breadth = x (let)]

$$\Rightarrow 308 + x = \frac{668}{2} = 334$$

$$\Rightarrow x = 334 - 308 = 26 \text{ cm}$$

36. (1) $7x + 6y + 4z = 122$ (i)

$4x + 5y + 3z = 88$ (ii)

$9x + 2y + z = 78$ (iii)

By equation (iii) $\times 3$ - equation (ii),

$27x + 6y + 3z = 234$

$4x + 5y + 3z = 88$

$- - - - -$

$23x + y = 146$

... (iv)

By equation (iii) $\times 4$ - equation (i),

$36x + 8y + 4z = 312$

$7x + 6y + 4z = 122$

$- - - - -$

$29x + 2y = 190$

... (v)

By equation (iv) $\times 2$ - equation (v),

$46x + 2y = 292$

$29x + 2y = 190$

$- - - - -$

$17x = 102$

... (iv)

$\Rightarrow x = 6$

From equation (iv),

$23 \times 6 + y = 146$

$\Rightarrow y = 146 - 138 = 8$

From equation (iii),

$9 \times 6 + 2 \times 8 + z = 78$

$\Rightarrow 54 + 16 + z = 78 \Rightarrow z = 78 - 70 = 8$

Clearly, $x < y < z$

37. (3) By equation II $\times 2$ - equation (I)

$8x + 6y = 118$

$7x + 6y = 110$

$- - - - -$

$x = 8$

From equation (I),

$\Rightarrow 7 \times 8 + 6y = 110$

$\Rightarrow 6y = 110 - 56 = 54 \Rightarrow y = 9$

From equation (III),

$8 + z = 15 \Rightarrow z = 7$

Clearly, $x < y > z$

38. (2) I. $\sqrt{(36)^{\frac{1}{2}} \times (1296)^{\frac{1}{4}}} = \sqrt{6 \times 6} = \pm 6$

By equation II $\times 3$ - equation I

$6y + 9z = 99$

$6y + 5z = 71$

$- - - - -$

$4z = 28 \Rightarrow z = 7$

From equation II,

$2y + 3 \times 7 = 33$

$\Rightarrow 2y = 33 - 21 = 12 \Rightarrow y = 6$

$x \leq y < z$

39. (4) By equation I $\times 55$ - II $\times 8$

$40x + 35y = 675$

$40x + 48y = 792$

$- - - - -$

$-13y = -117 \Rightarrow y = 9$

From Equation I,

$8x + 7 \times 9 = 135$

$\Rightarrow 8x = 135 - 63 = 72 \Rightarrow x = 9$

From equation III,

$9 \times 9 + 8z = 121$

$\Rightarrow 8z = 121 - 81 = 40 \Rightarrow z = 5$

Clearly, $x = y > z$

40. (5) I. $(x + y)^3 = 1331$

$\Rightarrow x + y = 11$

$\Rightarrow y = 11 - x$

From equation III,

$x(11 - x) = 28$

$\Rightarrow 11x - x^2 = 28$

$\Rightarrow x^2 - 11x + 28 = 0$

$\Rightarrow x^2 - 7x - 4x + 28 = 0$

$\Rightarrow x(x - 7) - 4(x - 7) = 0$

$\Rightarrow (x - 7)(x - 4) = 0$

$\Rightarrow x = 7, 4$

From equation I

$y = 4, 7$

From equation II

$7 - 4 + z = 0 \Rightarrow z = -3$

$4 - 7 + z = 0 \Rightarrow z = 3$

41. (1) Total number of employees in administration department

$$= \frac{2500 \times 12}{100} = 300$$

$$\text{Number of male employees} = \frac{7}{12} \times 300 = 175$$

Total number of employees in printing department

$$= \frac{2500 \times 6}{100} = 150$$

$$\text{Number of male employees} = \frac{2}{3} \times 150 = 100$$

$$\therefore \text{Required ratio} = 175 : 100 = 7 : 4$$

42. (3) Required difference = $2500 \times (18 - 14)\%$

$$= \frac{2500 \times 4}{100} = 100$$

43. (4) Total number of employees in HR department

$$= \frac{2500 \times 16}{100} = 400$$

$$\therefore \text{Number of males} = \frac{5}{8} \times 400 = 250$$

$$\text{and number of females} = 400 - 250 = 150$$

Number of employees in marketing department

$$= \frac{2500 \times 15}{100} = 375$$

$$\text{Number of males} = \frac{7}{15} \times 375 = 175$$

$$\text{Number of females} = 375 - 175 = 200$$

$$\therefore \text{Required ratio} = (250 + 175) : (150 + 200)$$

$$= 425 : 350 = 17 : 14$$

44. (4) 150

45. (2) Total number of employees in logistics department

$$= \frac{2500 \times 11}{100} = 275$$

$$\text{Number of males} = \frac{6}{11} \times 275 = 150$$

$$\text{Number of females} = 275 - 150 = 125$$

$$\therefore \text{Required difference} = 150 - 125 = 25$$

46. (4) Time taken in crossing each other

$$= \frac{\text{Total length of trains}}{\text{Relative speed}}$$

The information given in both statements is not sufficient as length of train A and individual speed of each train are required.

47. (4) Area of rectangle = Area of triangle.

From the information given in both the statements, we can find area of triangle or area of rectangle. For finding length, breadth is required, which is not known.

48. (3) From the statement I,

$$r = \frac{100 \times 100}{1000} = 10\%$$

Thus we have,

$$P = \text{Rs. } 1000, r = 10\%, t = 3 \text{ years}$$

Hence, C.I. can be determined From the statement II.

$$S.I = \frac{1000 \times r \times 2}{100} = 20r$$

$$C.I. = 1000 \left[\left(1 + \frac{r}{100} \right)^2 - 1 \right]$$

$$\therefore C.I. - S.I. = 1000 \left[\frac{200r + r^2}{10000} \right] - 20r$$

$$\Rightarrow 2000r + r^2 - 200r = 100$$

$$\Rightarrow r = 10$$

Hence, C.I. can be determined

49. (5) Let the unit's digit be x and ten's digit be y and $x < y$.

$$\therefore \text{Number} = 10y + x$$

From statement I,

$$y - x = 5 \quad \dots\dots(i)$$

From statement II,

$$y + x = 7 \quad \dots\dots(ii)$$

From (i) and (ii), x, y can be calculated and two digit number can be found.

50. (4) Let the distance between A and B be z km.

Again, let speed of boat in still water be x kmph and that of stream be y kmph.

$$\therefore \text{Rate downstream} = (x + y) \text{ kmph}$$

$$\text{Rate upstream} = (x - y) \text{ kmph}$$

From statement I,

$$\frac{z}{x + y} = 2 \quad \dots\dots(i)$$

From statement II

$$\frac{z}{x - y} = 4 \quad \dots\dots(ii)$$

51. (2) $\% \text{ profit} = \frac{\text{Profit earned}}{\text{Total investment}} \times 100$

$$\Rightarrow 65 = \frac{812500}{I} \times 100$$

$$\therefore I = \frac{812500 \times 100}{65} = \text{Rs. } 1250000$$

$$\therefore \text{Total income} = \text{Profit earned} + \text{total investment} = \text{Rs. } (812500 + 1250000) = \text{Rs. } 2062500$$

52. (3) If each company invests Rs. I and the profits earned by A and B be Rs. x and Rs. y respectively, then

$$70 = \frac{x}{I} \times 100$$

$$\Rightarrow 70I = 100x \quad \dots\dots(i)$$

$$\text{and } 55I = 100y \quad \dots\dots(ii)$$

$$\therefore \frac{70I}{100} + I : \frac{55I}{100} + I = 170I : 155I = 34 : 31$$

53. (2) Investment by company A = $\frac{2}{3} \times 27 = \text{Rs. } 18 \text{ Lakh}$

Investment by company B = Rs. 9 Lakh

$$\therefore \text{For company A, } 75 = \frac{P}{18} \times 100$$

$$\Rightarrow P = \frac{75 \times 18}{100} = \text{Rs. } 13.5 \text{ lakh}$$

$$\therefore \text{For company B, } 80 = \frac{Q}{9} \times 100$$

$$\Rightarrow Q = \text{Rs. } \frac{80 \times 9}{100} \text{ lakh} = \text{Rs. } 7.2 \text{ lakh}$$

\therefore Total profit earned = $13.5 + 7.2 = \text{Rs. } 20.7 \text{ lakh}$
For the year 2007,

$$45 = \frac{P}{12} \times 100$$

$$\Rightarrow P = \frac{45 \times 12}{100} = \text{Rs. } 5.4 \text{ lakh}$$

\therefore Total income = $12 + 5.4 = \text{Rs. } 17.4 \text{ lakh}$

\therefore If the amount invested in 2008 be Rs. I lakh, then

$$60 = \frac{17.4 - I}{I} \times 100$$

$$\Rightarrow 160I = 1740$$

$$\Rightarrow I = \frac{1740}{60} = \text{Rs. } 10.875 \text{ lakh}$$

$$= \text{Rs. } 1087500$$

55. (5) $55 = \frac{10.15}{I} \times 100 \Rightarrow I = \frac{10.15 \times 100}{55} = \text{Rs. } 18.45 \text{ lakh}$

56. (1) The pattern of the number series is:

$$32 + 1^2 = 32 + 1 = 33 \neq \boxed{34}$$

$$33 + 2^2 = 33 + 4 = 37$$

$$37 + 3^2 = 37 + 9 = 46$$

$$46 + 4^2 = 46 + 16 = 62$$

$$62 + 5^2 = 62 + 25 = 87$$

57. (3) The pattern of the number series is:

$$7 + 1 \times 11 = 7 + 11 = 18$$

$$18 + 3 \times 11 = 18 + 33 = 51 \neq \boxed{40}$$

$$51 + 5 \times 11 = 51 + 55 = 106$$

$$106 + 7 \times 11 = 106 + 77 = 183$$

$$183 + 9 \times 11 = 183 + 99 = 282$$

Grand Test – SPP-180309



58. (4) The pattern of the number series is:

850 - 1 × 7 = 843
843 - 2 × 7 = 829
829 - 3 × 7 = 808

808 - 4 × 7 = 780 ≠ 788

780 - 5 × 7 = 745
745 - 6 × 7 = 703

59. (5) The pattern of the number series is:

33 + 288 = 321
321 + 144 = 465
465 + 72 = 537
537 + 36 = 573

573 + 18 = 591 ≠ 590

591 + 9 = 600

60. (1) The pattern of the number series is:

37 + 1 × 5 = 42 ≠ 47

42 + 2 × 5 = 52
52 + 3 × 5 = 67
67 + 4 × 5 = 87
87 + 5 × 5 = 112
112 + 6 × 5 = 142

61. (5) $\Rightarrow 95^? = 95^{3.7} \div 95^{1.0}$
 $\Rightarrow 95^? = 95^{3.7-1} = 95^{2.7}$
 $\Rightarrow ? = 2.7$

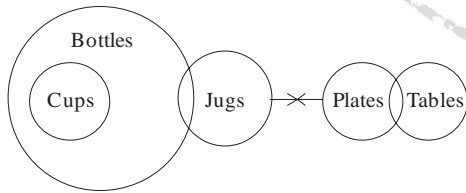
62. (2) $? = \sqrt{10000} + \frac{3}{5} \times 1892$
 $= 100 + 1135.2 = 1235.2 = 1230$

63. (3) $? = \frac{0.0004}{0.0001} \times 36 = 4 \times 36 = 144 = 145$

64. (1) $? = 140\% \text{ of } 12300$
 $= \frac{140 \times 12300}{100} = 17220 = 17000$

65. (3) $? = 3739 + 160 \times 30 = 3739 + 4800 = 8539 = 8200$

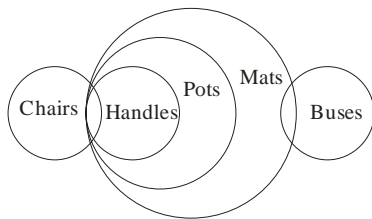
66. (5)



I. }
III. } ✓ either I or III II. ✗ IV. ✗

Either I (or) III follow.

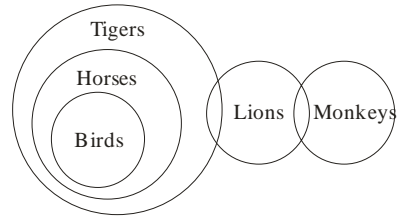
67. (5)



I. }
III. } ✓ either I or III II. ✓ IV. ✓

Either I (or) III, II and IV follows.

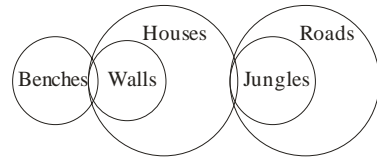
68. (1)



I. ✓ II. ✗ III. ✓
IV. ✗

Only I and III follows.

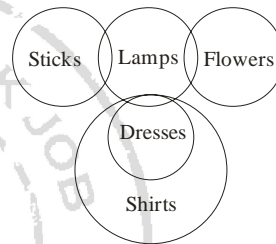
69. (3)



I. ✗ II. ✗ III. ✓
IV. ✓

Only III and IV follows.

70. (1)



I. ✗ II. ✗ III. ✗
IV. ✗

None follows.

71-75.

Eligibility Criteria					
Applicant	(i)	(ii)	(iii)	(iv)	(v)
Ashok	✗	✗	✗	✗	✗
Navin	✗	✗	✗	✗	✓
Prabhu	✓	✗	✗	✗	✗
Meena	✗	✗	✓	✗	✗
Shobha	✓	✗	✗	✗	✓

71. (1) Ashok Malhotra, himself is not a defence personnel. Therefore, he must pay one-time membership fee of Rs. one lakh. Thus, he is not eligible.

72. (2) Navin Singh is a national level sports personnel and hence he can become a member by paying only Rs. 20 thousand as membership fee. The criterion of annual income is not applicable to him. Again, Navin Singh is the son of existing member of the club. Under this criterion he must pay Rs. 70 thousand as membership fee and must have an annual income of Rs. three lakhs. But, there is no information about his annual income. Therefore, Navin Singh is eligible under criterion (v) only.

73. (2) Prabhu Sharma is retired judge of the Supreme Court. Therefore, criterion (iv) is not applicable. He is eligible under criteria (i) and (v) only.

74. (3) MeenaJaswani is daughter of an existing member of the club. Therefore, she has to pay Rs. 70 thousand as

Grand Test – SPP-180309



membership fee and she must have an annual income of Rs. three lakhs. Thus, she is eligible under criterion (iii). She is presently working in defence sector. Therefore, criterion (ii) is not applicable.

75. (4) Shobha Patil is eligible under criteria (i) and (v).

76. (5) 1 2 3 4 5 6 7 8 9 10 11 12
P E R M E A B I L I T Y

Specified letters : E, M, A, L

Meaningful words : MEAL, MALE, LAME

77. (1) Money is related with wealth. Similarly, pity is related with kindness.

78. (4) Without food we feel hungry. Without water we feel thirsty. Without air we feel suffocation. Similarly, without leg one is lame.

79. (1)

P A T H O L O G I S T
+1 -1
P I U B Q K S R H F N

Similarly,
C O N T R O V E R S Y
+1 -1
S U O P D N X R Q D U

80. (1)

81-85.

Employee	Department	Favourite Sport
A	Personnel	Table Tennis
B	Administration	Football
C	Administration	Hockey
D	Administration	Basketball
E	Marketing	Cricket
F	Personnel	Volleyball
G	Marketing	Lawn Tennis
H	Marketing	Badminton

81. (3) B, C and D work in Administration Department.

82. (2) E works in Marketing Department.

83. (5) None of the Combinations is correct.

84. (1) E's favourite sport is Cricket.

85. (4) G's favourite sport is Lawn Tennis.

86-87. $S \leq T < U < G$

$R \geq T < U \geq W$

$G > U \geq W, S \leq T \leq R$

86. (1) Conclusions

I. $S < G$: True

II. $W \leq R$: Not true

87. (5) Conclusions

I. $R \geq S$: True

II. $W < G$: True

88. (5) $H \geq G \geq F$

$F \leq G < I$

$Z < G < I$

Conclusions

I. $F \leq H$: True

II. $Z < I$: True

89-90. Sudha > Bharat, Abhishek

Karan > Rahul

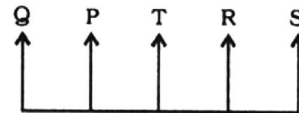
Dana > Parul = Sudha

Karan > Rahul > Dana > Parul = Sudha > Abhishek > Bharat

89. (4) Dana is the third heaviest.

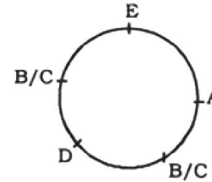
90. (3) Bharat weighs minimum.

91. (5) From both the statements



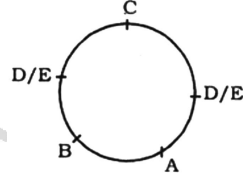
T sits exactly in the middle of the line.

92. (1) From statement I

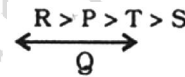


E sits to the immediate right of A.

From statement II



93. (4) From both the statements



94. (5) From both the statements



95. (2) $L > V \Rightarrow L$ is daughter of V.

$V < J \Rightarrow V$ is the wife of J.

$J + P \Rightarrow J$ is the father of P.

J is the father of L and P.

$S \times A \Rightarrow S$ is son of A

Thus, S and P are first cousins.

96. (5) $F \times R \Rightarrow F$ is the son of R.

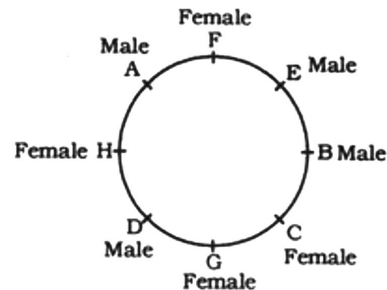
$R < S \Rightarrow R$ is the wife of S.

$S \times M \Rightarrow S$ is the son of M.

Now, F is grandson of M.

M is either grandfather or grandmother of F.

97-100.



F is the wife of D.

B is the son of D and F.

H is the daughter D and F.

C is the wife B.

A's brother is E.

97. (5) A sits exactly between H and F.

98. (1) E is the brother of A.

99. (3) A is grandson of D.

100. (1) Except B, all others are females.

