# SBI PO Preliminary Grand Test –SPP-180303

## HINTS & SOLUTIONS

### ANSWER KEY

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

### HINTS & SOLUTIONS

1. (5) The desire for money has overshadowed the search for knowledge
2. (2) The fact that the best minds do not want to become teachers and this in turn leads to good students seeking knowledge elsewhere
3. (4) Only (A) and (C)
4. (5) All (A), (B) and (C)-
5. (3) Only (B) and (C)
6. (1) Only (B)
7. (2) The meaning of the word Speculate (Verb) as used in the passage is : to form an idea about something without knowing all the details or facts. The word Contemplate (Verb) means : consider; think about. Hence, the words speculate and contemplate are synonymous.
8. (5) The meaning of the word Quintessential (Adjective) as used in the passage is : the most important; excellent.
9. (3) The meaning of the word Bright (Adjective) as used in the passage is : intelligent; quick to learn.
   Hence, the words bright and dull are antonymous.
10. (1) The meaning of the word Elusive (Adjective) as used in the passage is : difficult to find, de-fine or achieve.
    Hence, the words elusive and definite are antonymous.
11. (4) 12. (5)
13. (4) 14. (3) 15. (1)
16. (1) endeavours, touch 17. (5) leads, unhealthy
18. (3) observed, only 19. (2) gearing, scheduled
20. (4) efforts, carried 21. (2) for
22. (3) place 23. (2) efforts
24. (4) unlikely 25. (5) marginal
26. (3) Neither ..... nor is correct form of correlative.
27. (2) contribute towards its growth
28. (4) Since many companies are
29. (1) Here, comparative degree should be used.
30. (5) No correction required
31. (4) Abhinav's investment = Rs. 6000

Sunil's investment = $\frac{70\times6000}{100}$ = Rs. 4200

Rita's investment = $\frac{4200\times125}{100}$ = Rs. 5250

$\therefore$ Required ratio = 5250 : (6000 + 4200 + 5250)
= 5250 : 15450 = 35 : 103

32. (5) Principal = $\frac{SI\times100}{Time\times Rate}$

= $\frac{1000\times100}{4\times5}$ = Rs. 5000

Case II
Principal = Rs. 10000

$\therefore CI = P\left[\left(1+\frac{Rate}{100}\right)^{Time}-1\right]$

$=10000\left[\left(1+\frac{5}{100}\right)^{2}-1\right]$

$=10000\times\left[\left(\frac{21}{20}\right)^{2}-1\right]$

$=10000\times\frac{41}{400}=Rs.1025$

33. (1) Perimeter of square = 2 × Perimeter of rectangle
= 2 × 2 (8 + 7) = 60 cm.

$\therefore$ Side of square = $\frac{60}{4}$ = 15 cm.

$\therefore$ Diameter of semi-circle = 15 cm.

$\therefore$ Circumference of semi-circle = $\frac{\pi d}{2}+d$

$=\frac{22}{7\times2}\times15+15=38.57cm$

34. (5) Let Radha's present age = x years.
$\therefore$ x = 2 (x - 12) - 3

$\Rightarrow x = 2x - 24 - 3 \Rightarrow x = 27$

$\therefore$ Raj's present age $= \frac{4}{9} \times 27 = 12$ years

$\therefore$ Raj's age after 5 years = 12 + 5 = 17 years

35. (3) $5x + 9x + 4x = 72 \times 3$

$\Rightarrow 18x = 72 \times 3$

$\therefore x = \frac{72 \times 3}{18} =$ 12 kmph

$\therefore$ Average speed of car and train

$= \frac{5x + 9x}{2} = 7x$ = 84 kmph

36. (5) The pattern is :

$2 \times 3 + 2 = 6 + 2 = 8$

$8 \times 3 + 2 = 24 + 2 = 26$

$26 \times 3 + 2 = 78 + 2 = \boxed{80}$

$80 \times 3 + 2 = 240 + 2 = 242$

37. (1) The pattern is :

$3 \times 1 + 1^2 = 3 + 1 = 4$

$4 \times 2 + 2^2 = 8 + 4 = 12$

$12 \times 3 + 3^2 = 36 + 9 = \boxed{45}$

$45 \times 4 + 4^2 = 180 + 16 = 196$

38. (4) The pattern is:

$9 \times 2 - 1 = 18 - 1 = 17$

$17 \times 2 - 1 = 34 - 1 = \boxed{33}$

$33 \times 2 - 1 = 66 - 1 = 65$

$65 \times 2 - 1 = 130 - 1 = 129$

39. (2) The pattern is :

$7 \times 2 - 1 = 14 - 1 = 13$

$13 \times 2 - 1 = 26 - 1 = \boxed{25}$

$25 \times 2 - 1 = 50 - 1 = 49$

$49 \times 2 - 1 = 98 - 1 = 97$

40. (3) The pattern is :

$5 \times 0.5 + 0.5 = 2.5 + 0.5 = 3$

$3 \times 1.5 + 1.5 = 4.5 + 1.5 = 6$

$6 \times 2.5 + 2.5 = 15 + 2.5 = \boxed{17.5}$

$17.5 \times 3.5 + 3.5 = 61.25 + 3.5 = 64.75$

41. (2) Gita's average earnings

$= \frac{140 + 200 + 420 + 400}{4} = \frac{1160}{4}$ = Rs. 290

42. (4) Amount earned by Rahul and Naveen

= 180 + 260 + 340 + 160 = Rs. 940

43. (3) Naveen's total earnings on Wednesday

= 420 + 120 = Rs. 540

44. (1) Required difference

= 240 - 200 = Rs. 40

45. (5) Required ratio

= 360 : 120 : 160

= 9 : 3 : 4

46. (1) The committee will beformed as follows :

(i)1 woman and 2 men

(ii)2 women and 1 man

(iii)3 women

$\therefore$ Required number of committees

$= {}^5C_1 \times {}^4C_2 + {}^5C_2 \times {}^4C_1 + {}^5C_3$

$= 5 \times \frac{4 \times 3}{1 \times 2} + \frac{5 \times 4}{1 \times 2} \times 4 + \frac{5 \times 4 \times 3}{1 \times 2 \times 3}$

=30+40+10=80

47. (2) The word TOTAL has 5 letters in which T comes twice.

$\therefore$ Total number of arrangements

$= \frac{5!}{2!} = \frac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1} = 60$

48. (2) (B+C)'s 1 day's work $= \frac{1}{8}$ ..... (i)

(A+B)'s 1 day's work = $\frac{1}{12}$ ..... (ii)

(A+C)'s 1 day's work = $\frac{1}{16}$ ..... (ii)

On adding all these three equations,

2 (A + B + C)'s 1 day's work

$= \frac{1}{8} + \frac{1}{12} + \frac{1}{16} = \frac{6 + 4 + 3}{48} = \frac{13}{48}$

$\Rightarrow$ (A + B + C)'s 1 day's work = $\frac{13}{96}$

$\therefore$ A, B and C together can complete the work in

$= \frac{96}{13} = 7\frac{5}{13}$ days

49. (3) Interest is compounded half yearly.

$\therefore$ R = 20% p.a. = 10%/half year

T = 2 years = 4 half years

$\therefore \text{C.I.} = P\left[\left(1 + \frac{R}{100}\right)^T - 1\right]$

$= 10000\left[\left(1 + \frac{10}{100}\right)^4 - 1\right]$

$= 10000\left[\left(\frac{11}{10}\right)^4 - 1\right]$

$= 10000\left[\left(\frac{121}{100} + 1\right)\left(\frac{121}{100} - 1\right)\right]$

$= 10000 \times \frac{221}{100} \times \frac{21}{100}$ = Rs. 4641

50. (4) Let B's income = Rs. x .

$\therefore$ A's income $= \frac{150}{100} \times x = \text{Rs.}\frac{3x}{2}$

C's income = $\frac{120}{100} \times \frac{3x}{2}$ = Rs. $\frac{9x}{5}$

$\therefore x + \frac{3x}{2} + \frac{9x}{5} = 86000$

$\Rightarrow \frac{10x + 15x + 18x}{10} = 86000$

$\Rightarrow 43x = 860000$

$\Rightarrow x = \frac{860000}{43} = 20000$

$\therefore$ C's income

$= \text{Rs.}\left(\frac{9}{5}\times 20000\right) = \text{Rs.}36000$

51. (1) I. $5x^2 - 18x + 9 = 0$

$\Rightarrow 5x^2 - 15x - 3x + 9 = 0$

$\Rightarrow 5x(x-3) - 3(x-3) = 0$

$\Rightarrow (x-3)(5x-3) = 0$

$\therefore x = 3 \text{ or } \frac{3}{5}$

II. $20y^2 - 13y + 2 = 0$

$\Rightarrow 20y^2 - 8y - 5y + 2 = 0$

$\Rightarrow 4y(5y-2) - 1(5y-2) = 0$

$\Rightarrow (4y-1)(5y-2) = 0$

$\therefore y = \frac{1}{4} \text{or} \frac{2}{5}$

Clearly, x > y

52. (2) I. $x^3 = 878 + 453 = 1331$

$\therefore x = \sqrt[3]{1331} = 11$

II. $y^2 = 82 + 39 = 121$

$\therefore y = \sqrt{121} = \pm 11$

$\therefore x \geq y$

53. (5) I. $\frac{3}{\sqrt{x}} + \frac{4}{\sqrt{x}} = \sqrt{x}$

$\Rightarrow 3 + 4 = x \Rightarrow x = 7$

II. $y^3 - \frac{(7)^{\frac{7}{2}}}{\sqrt{y}} = 0$

$\Rightarrow y^{\frac{7}{2}} = 7^{\frac{7}{2}} \Rightarrow y = 7$

$\therefore x = y$

54. (5) I. $9x - 4x = 54.55 + 15.45$

$\Rightarrow 5x = 70 \Rightarrow x = 14$

II. $\sqrt{y + 155} = 7 + 6 = 13$

$\Rightarrow y + 155 = 169$

$\Rightarrow y = 169 - 155 = 14$

$\therefore x = y$

55. (3) I. $x^2 + 11x + 30 = 0$

$\Rightarrow x^2 + 6x + 5x + 30 = 0$

$\Rightarrow x(x+6) + 5(x+6) = 0$

$\Rightarrow (x+5)(x+6) = 0$

$\therefore x = -5 \text{ or } -6$

II. $y^2 + 7y + 12 = 0$

$\Rightarrow y^2 + 4y + 3y + 12 = 0$

$\Rightarrow y(y+4) + 3(y+4) = 0$

$\Rightarrow (y+3)(y+4) = 0$

$\therefore y = -3 \text{ or } -4$

Clearly, x < y

56. (4) Average number of players who play Football and Rugby

$= \frac{1}{2}\left[(17+13)\% \text{ of } 4200\right]$

$= \frac{1}{2} \times 4200 \times \frac{30}{100} = 630$

57. (1) Number of players who play Rugby

$= 4200 \times \frac{13}{100} = 546$

Number of female players who play Rugby

$= 2000 \times \frac{10}{100} = 200$

$\therefore$ Number of male players who play Rugby

= 546 - 200 = 346

Number of female players who play Lawn Tennis

$= 2000 \times \frac{22}{400} = 440$

$\therefore$ Required difference = 440 - 346 = 94

58. (3) Number of female cricketers

$= 2000 \times \frac{40}{100} = 800$

Number of male Hockey players

$= \frac{4200 \times 10}{100} - \frac{2000 \times 15}{100} = 420 - 300 = 120$

$\therefore$ Required ratio = 800 : 120 = 20 : 3

59. (2) Number of male players who play Football, Cricket and Lawn Tennis

= (17 + 35 + 25)% of 4200 - (13 + 40 + 22)% of 2000

$= 4200 \times \frac{77}{100} - 2000 \times \frac{75}{100} = 3234 - 1500 = 1734$

60. (1) Number of male players who play Rugby

$= 4200 \times \frac{13}{100} - 200 = 346$

Number of players who play Lawn Tennis

$= 4200 \times \frac{25}{100} = 1050$

$\therefore$ Required percentage $= \frac{346}{1050} \times 100 = 33$

61. (4) ? = 95 × 6 × 6 = 3420

$\therefore$ Required answer = 3400

62. (1) 4735 - 3454 – 1613 = ? - 1611

$\therefore$ ? = - 332 + 1611 = 1279

$\therefore$ Required answer = 1280

63. (5) $? = \frac{320}{55} \times \frac{970}{250} \times \frac{55}{60} = 21$

64. (3) 133 × 3 - 112 + 74 = 361

$\therefore$ Required answer = 357

65. (2) ? = 32 × 2800 ÷ 550 + 120 = 282.9

$\therefore$ Required answer = 284

66-70.

| | | |
|---|---|---|
| © ⇒ ≤ | % ⇒ ≥ | ★ ⇒ > |
| @ ⇒ < | $ ⇒ = | |

66. (2) K @ V $\Rightarrow$ K < V

V © N $\Rightarrow$ V ≤ N

N%F $\Rightarrow$ N > F

Therefore,

K < V ≤ N ≥ F

Conclusions

I. F @ V $\Rightarrow$ F < V : Not True

II. K @ N $\Rightarrow$ K < N : True

67. (5) H © W ⇒ H≤W
W $ M ⇒ W=M
M@B ⇒ M<B
Therefore,
H≤W=M<B
Conclusions
I. B ★H ⇒ B > H : True
II. M % H ⇒ M ≥ H : True

68. (4) D%B ⇒ D ≥B
B ★T ⇒ B>T
T$M ⇒ T=M
Therefore,
D ≥B>T=M
Conclusions
I.T © D ⇒ T ≤D : Not True
II. M© D ⇒ M≤D : Not True

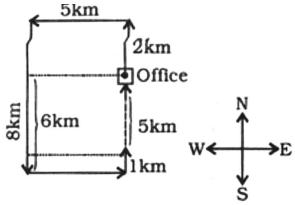
69. (1) M ★T ⇒ M>T
T@K ⇒ T<K
K © N ⇒ K ≤ N
Therefore,
M>T< K≤N
Conclusions
I.N ★T ⇒ N>T:True
II. N ★M ⇒ N>M: Not True

70. (3) R$J ⇒ R=J
J % D ⇒ J ≥ D
D ★F ⇒ D>F
Therefore,
R=J≥D>F
Conclusions
I.D $ R ⇒ D = R : Not True
II. D @ R ⇒ D <R : Not True
Either I or II is true.

71-72.

| No. | Floor | Person |
|---|---|---|
| 6 | Fifth floor | B |
| 5 | Fourth floor | C |
| 4 | Third floor | F |
| 3 | Second floor | E |
| 2 | First floor | A |
| 1 | Ground floor | D |

71. (4) A and E live on the floors exactly between D and F.
72. (1) B lives on Fifth Floor numbered sixth.
73. (5)




74-75.
L □ □ P
L □ □ PS
L □ APS
LEAPS

74. (4) P is placed second to the right of E.
75. (3) The word is LEAPS.

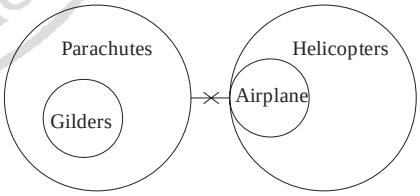
76-80.

| Day | Person | City |
|---|---|---|
| Monday | R | New York |
| Tuesday | M | Bangkok |
| Wednesday | S | Tokyo |
| Thursday | O | Paris |
| Friday | P | Seoul |
| Saturday | N | Madrid |
| Sunday | Q | London |

76. (3) O attended Seminar on Thursday and Thursday - 1 = Wednesday.
N attended Seminar on Saturday and Saturday – 1 = Friday.
Q attended Seminar on Sunday and Sunday- 1 = Saturday.
S attended Seminar on Wednesday and Wednesday – 1 =Tuesday.
M attended Seminar on Tuesday and Tuesday + 2 =Thursday.
77. (1) N attended Seminar Madrid on Saturday.
78. (4) P attended Seminar Seoul on Friday.
79. (5) The combination Thursday - O - Paris is correct.
80. (2) R attended Seminar in New York on Monday.
M attended Seminar exactly between R and S.
P attended Seminar in Seoul on Friday.

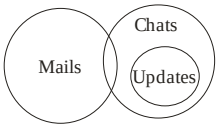
81. (1) Option (1) may be the cause of vacant seats in the engineering colleges.
82. (2) Option (2) may be a possible effect of big pot holes developed on the roads.
83. (3) Option (3) indicates that the results are not in line with the general trend.
84. (3) Option (3) may be a possible fallout of the given situation.
85. (3) Option (3) substantiates the views expressed in the statement.

86-87.



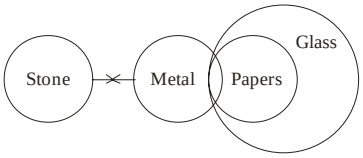

86. (2) I. ✗ II. ✓
Only II follows.
87. (5) I. ✓ II. ✓
Both I and II follows.

88. (1)




I. ✓ II. ✗
Only I follows.

89-90.



89. (2) I. × II. ✓
Only II follows.

90. (1) I. ✓ II. ×
Only I follows.

91-93.

| | |
|---|---|
| 7th | G |
| 6th | C |
| 5th | D |
| 4th | A |
| 3rd | F |
| 2nd | E |
| 1st | B |

91. (4) G lives on the topmost floor

92. (3) C lives immediately above D's floor.

93. (5) F, D. B and G live on odd numbered floor. C lives on even numbered floor.

94. (4)

$L \xrightarrow{+3} O \xrightarrow{-5} J$
$F \xrightarrow{+3} I \xrightarrow{-5} D$
$R \xrightarrow{+3} U \xrightarrow{-5} P$
$I \xrightarrow{+3} L \xrightarrow{+2} N$
$C \xrightarrow{+3} F \xrightarrow{-5} A$

95. (1)

$B \xrightarrow{+1} C \xrightarrow{+2} E \xrightarrow{+3} H \xrightarrow{+4} L \xrightarrow{+5} \boxed{Q}$

96-100.

| | | |
|---|---|---|
| P | Green | II |
| Q | Black | III |
| R | Red | IV |
| S | Pink | I |
| T | Yellow | VI |
| M | Blue | VI |

96. (3) R does study in Class IV.

97. (5) R likes red colour.

98. (1) P likes green colour.

99. (5) None is correct

100. (4) M does study in Class V.