

## SBI PO Preliminary Grand Test –SPP-190435

### HINTS & SOLUTIONS

#### ANSWER KEY

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

#### HINTS & SOLUTIONS

- 1.(2)
- 2.(3)
- 3.(5)
- 4.(3)
- 5.(4)
- 6.(5)
- 7.(1)
- 8.(4)
- 9.(5)
- 10.(2)
- 11.(1)
- 12.(3)
- 13.(5)
- 14.(4)
- 15.(5)
- 16.(5)
- 17.(1)
- 18.(3)
- 19.(2)
- 20.(4)
21. (3) The correct spelling is **registered**.

22. (1) The correct spelling is **different**.
23. (1) In comparative degree, **than** should be used.
24. (2) Here, leaves very (Present Simple) should be used.
25. (2) Here, on organisational (Adjective) performance have (Plural) .....should be used.  
Here, the subject is **numerous research studies** (Plural).

26.(5)

27.(1)

28.(2)

29.(4)

30.(4)

31. (1)  $x = 55, y = 36; x > y$ 32. (3)  $x = -7/3, y = 5.45; x < y$ 33. (1)  $x = 13/2, y = 3; x > y$ 34. (5)  $x = 4, -\frac{8}{3}, y = 7, -\frac{2}{3}$ 

No relation.

35. (3)  $x = -8, -8, y = 0, 121; x < y$ 

36.(5)

Efficiency :

1<sup>st</sup> group = 2<sup>nd</sup> group

2 m × 1 hr. = 3 m × 1.5 hr.

4m = 9M

Or  $38m = 9/4 \times 38M = 9/2 \times 19M$ 

$$\frac{M_1 \times D_1 \times H_1}{W_1} = \frac{M_2 \times D_2 \times H_2}{W_2}$$

$$\Rightarrow \frac{38m \times 6 \times 12}{1} = \frac{57M \times 8 \times x}{2}$$

$$\Rightarrow \frac{9}{2} \times 19M \times 6 \times 12 = 57M \times 4 \times x$$

X = 27 days.

37.(3) Let two angles of triangle be 5x, 7x

Third angle =  $2/3 \times 180^\circ = 120^\circ$  $120^\circ + 5x + 7x = 180 \Rightarrow X = 5^\circ$ Second largest angle =  $7x = 7 \times 5 = 35^\circ$ 

38.(4) Allegation method

$$\begin{array}{ccc} 5/6 & & 1/4 \\ & \diagdown & / \\ & \square & \\ & / & \diagdown \\ 1/2 & & 1/2 \end{array}$$

$$\frac{1}{2} - \frac{1}{4} = \frac{1}{4} \quad \frac{5}{6} - \frac{1}{2} = \frac{1}{3}$$

or 3 : 4

39.(2) Let the cost price of second cow be 'x' Rs.

CP of first cow = (750 - x)

$$\text{Now, } (750 - x) \times \frac{122}{100} + x \times \frac{92}{100} = 750$$

$$\Rightarrow x = \text{Rs.}550$$

$$\text{Selling price of second cow} = 550 \times \frac{92}{100} = \text{Rs.}506$$

40.(2) Let first part be Rs.'x' and second part be Rs.'y'

Third part will be = Rs. (2189 - x - y)

From question,

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$$\frac{x \times 4 \times 1}{100} = \frac{y \times 4 \times 2}{100} = \frac{(2189 - x - y) \times 4 \times 3}{100}$$

Or,  $x = 2y = 3(2189 - x - y)$

From above, we get,  $x = \text{Rs.}1194$ ,  $y = \text{Rs.}597$

Third part  $(2189 - x - y) = \text{Rs.}398$ .

41. (2) Total population of Christian = 137.5  
Total population of other religion = 142.5  
Total population of muslim = 137.5

42. (4) Population density of,

$$\text{Syria} = \frac{75 \times 100}{16 \times 50} = 9.375$$

$$\text{Egypt} = \frac{72.5 \times 100}{25 \times 50} = 5.8$$

$$\text{Somalia} = \frac{55 \times 100}{18 \times 50} = 6.11$$

$$\text{Sudan} = \frac{55 \times 100}{20 \times 50} = 5.5$$

$$\text{Maldives} = \frac{80 \times 100}{5 \times 50} = 9.375$$

Hence, Sudan has minimum population density.

43. (1) Percentage =  $(32.5/10) \times 100 = 325\%$

44. (5) Maximum population is for Kenya & Maldives i.e. 80 lakh

45. (3) Let population of Christian, Muslim and other religion in Maldives was,  $x$ ,  $y$  and  $z$ .

$$x \left(1 - \frac{20}{100}\right)^2 = 20 \Rightarrow x = 31.25$$

$$y \left(1 - \frac{50}{100}\right)^2 = 27.5 \Rightarrow y = 110$$

$$z \left(1 - \frac{50}{100}\right)^2 = 32.5 \Rightarrow z = 130$$

Therefore total population was =  $130 + 110 + 31.25 = 271.25$

46. (2) Required ratio

$$= \frac{(700 + 600 + 720)}{(750 + 560 + 750)} = \frac{2020}{2060}$$

i.e., 101 : 103.

47. (1) Total number of students from all the institutes in 2002 =  $750 + 640 + 680 + 780 + 740 + 620 + 650 = 4860$

Therefore required number of students passed

$$= \frac{70}{100} \times 4860 = 3402$$

48. (3) Number of students for all the given years in institute B =  $(640 + 600 + 620 + 660 + 760 + 740 + 700) = 4720$

$$\text{Total number of students passed} = \frac{60}{100} \times 4720 = 2832$$

Hence, average number of students passed

$$= \frac{2832}{7} = 404.57 \approx 405$$

49. (4) Required %

$$= \frac{640}{(620 + 580 + 640 + 560 + 650 + 630 + 660)} \times 100\%$$

$$= \frac{640}{4340} \times 100\% \approx 14.75\%$$

50. (3) Required difference

$$= (740 + 760 + 690 + 790 + 780 + 650 + 680) \\ \sim (780 + 700 + 660 + 840 + 720 + 660 + 740)$$

$$= 5090 \sim 5100 = 5100 - 5090 = 10.$$

51. (1) The given number series is based on the following pattern:

$$12 \times 1 = 12$$

$$12 \times 1.5 = 18$$

$$18 \times (1 + 1.5) = 18 \times 2.5 = 45$$

$$45 \times (1.5 + 2.5) = 45 \times 4 = 180$$

$$180 \times (4 + 2.5) = 180 \times 6.5 = 1170$$

$$\therefore ? = 1170 \times (4 + 6.5) = \boxed{12285}$$

Hence, 12285 will replace the question mark.

52. (3) The given number series is based on the following pattern

$$467 - 444 = 23 = 23 \times 1$$

$$513 - 467 = 46 = 23 \times 2$$

$$582 - 513 = 69 = 23 \times 3$$

$$674 - 582 = 92 = 23 \times 4$$

$$789 - 674 = 115 = 23 \times 5$$

$$\therefore ? = 789 + 23 \times 6$$

$$= 789 + 138 = \boxed{927}$$

Hence, 927 will replace the question mark.

53. (2) The given number series is based on the following pattern:

$$1 = 1^4; \quad 16 = 2^4;$$

$$81 = 3^4; \quad 256 = 4^4;$$

$$625 = 5^4; \quad 1296 = 6^4;$$

$$\therefore ? = 7^4 = 7 \times 7 \times 7 \times 7 = \boxed{2401}$$

Hence, 2401 will replace the question mark.

54. (5) The given number series is based on the following pattern:

$$23 \times 1 + 2 = 25$$

$$25 \times 2 + 3 = 53$$

$$53 \times 3 + 4 = 163$$

$$163 \times 4 + 5 = 657$$

$$657 \times 5 + 6 = 3291$$

$$\therefore ? = 3291 \times 6 + 7 = 19746 + 7 = \boxed{19753}$$

Hence, 19753 will replace the question mark.

55. (4) The given number series is based on the following pattern:

$$13 \times 1 = 13$$

$$13 \times 5 = 65$$

$$65 \times 9 = 585$$

$$585 \times 13 = 7605$$

$$7605 \times 17 = 129285$$

$$\therefore ? = 129285 \times 21 = \boxed{2714985}$$

Hence, 2714985 will replace the question mark.

56. (5) Question can't be answered even after using all the information

57. (2) From II and III,

$$P \times \left(1 + \frac{10}{100}\right)^3 - P - \frac{P \times 3 \times 10}{100} = 465$$

$$\Rightarrow P = 15000$$

Total compound interest at the end of three year

$$= 15000 \times \left(1 + \frac{10}{100}\right)^3 - 15000 = 4965$$

58. (1) From (C),  $3x = 5z$

From (C) and (B),  $5x + y = 29$

From (A), (B) and (C),  $x = 5$ ,  $y = 4$  and  $z = 3$

Therefore  $3x + 2y - 4z = 15 + 8 - 12 = 11$ .

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59. (1) From (A), Area =  $\frac{3\sqrt{3}}{2} \times \left(\frac{12}{6}\right)^2 = 6\sqrt{3}$  sq. mtr.

From (B), Area =  $\frac{3\sqrt{3}}{2} \times 1 \times 1 = 1.5\sqrt{3}$  sq. mtr.

From (C), Area =  $\frac{3\sqrt{3}}{2} \times (\sqrt{5})^2 = 7.5\sqrt{3}$  sq. mtr.

Hence area can be found out by any one of them.

60. (5) From (A), History + English + Physics = 210  
 From (B), English ~ History = 10  
 From (C), Biology + Physics = 120.  
 So, we cannot find marks in Physics by use any of the given statements.

61. (2)  $\frac{7441}{34} \times 12 = ? \times 9 + 110$

$\Rightarrow 2626 = ? \times 9 + 110$

$\Rightarrow ? \times 9 = 2516$

$\Rightarrow ? = \frac{2516}{9} = 280$

62. (3)  $? = \frac{989}{34} \times \frac{869}{65} \times \frac{515}{207} = 970$

63. (5)  $? = (32)^2 + (24)^2 - (17)^2 = 1024 + 576 - 289 = 1311$

∴ Required answer = 1310

64. (3)  $? = \sqrt{5456} \times \sqrt{2120} \div \sqrt{460} = 74 \times 46 \div 21 = 162$

∴ Required answer = 160

65. (1)  $\frac{800 \times 67}{100} - 231 = ? - \frac{800 \times 23}{100}$

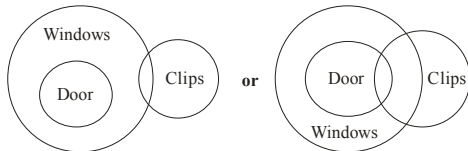
$\Rightarrow 536 - 231 = ? - 184$

$\Rightarrow 305 = ? - 184$

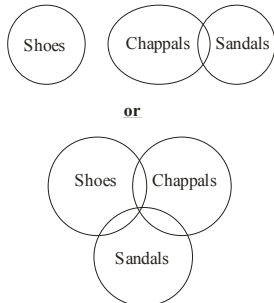
∴  $? = 305 + 184 = 489$

∴ Required answer = 490

66.(5)

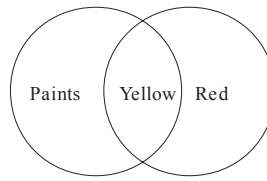


67.(4)

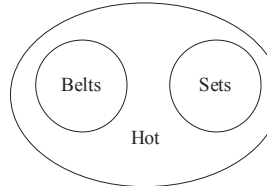


68.(2)

69.(5)



70.(4)



71. (1) From statement I

reason to **learn better** → **xn zt aj ly**

**to learn** study **better** → **zt xn ly rj**

The code for 'reason' is 'aj'.

From statement II

**reason to** study important → **yk xn aj rj**

**to find reason** necessary → **st xn ds aj**

The code for 'reason' may be 'xn' or 'aj'.

From statement I

7 persons → **L U || T S ||**

Or

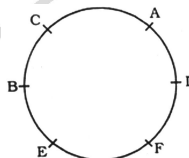
**T S L U** ← 6 persons

From Statement II

**O | M | L | S | T | R** ← 8 Persons

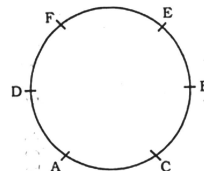
T is 10<sup>th</sup> from the right end.

From statement I



D is third to the left or right of B.

From statement II



D is third to the left or right of B.

74. (1)

From statement I

T is daughter of R.

T is wife of M.

L is daughter of M and T.

L is cousin of J.

So, M is uncle of J.

From statement II

Y is sister of daughter in-law of A.

J is son of D and Y.

A is father-in-law of T.

M is grandfather or great grandmother of J.

75. (3)

From statement I

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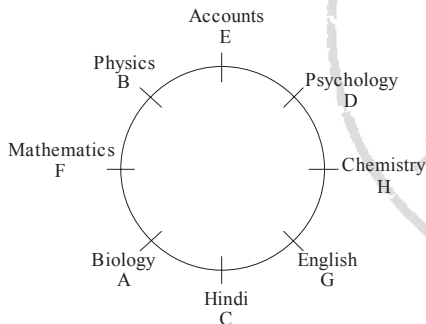


Day	Play
Monday	U
Tuesday	Z
Wednesday	V
Thursday	W
Friday	Y
Saturday	T/X
Sunday	T/X

From statement II

Day	Play
Monday	U
Tuesday	U
Wednesday	Y
Thursday	Z
Friday	Z/V
Saturday	V/W
Sunday	W

76-80.



- 76.(2)
- 77.(4)
- 78.(1)
- 79.(3)
- 80.(2)

81-85.

Floor number	person	Subject
8	W	Economics
7	U	English
6	P	History
5	T	Mathematics
4	V	Hindi
3	R	Geography
2	S	Sociology
1	Q	Statistics

- 81. (3) Professor of Hindi, V lives exactly between the floors of T and professor of Geography R.
- 82. (1) The professor of Economics W lives on the topmost floor.
- 83. (4) Professor of Sociology S lives immediately above the floor of professor of Statistics Q.

84. (2) Professor of Geography R lives on the third numbered floor.

85. (4) Four persons U, P, T, and V live between the floors of W and the professor of Geography R.

86.(4)  $P \geq M = Q \geq R < N \leq O$

**Conclusions**

I.  $P = R$  : Not True                      II.  $M \leq O$  : Not True

87.(2)  $P \geq Q > R < S$

$M = N \leq P \geq Q \geq T$

**Conclusions**

I.  $S > P$  : Not True                      II.  $T \leq P$  : True

88.(1)  $D \leq P < Q \geq R > N = O$

**Conclusions**

I.  $Q > O$  : True                      II.  $O > D$  : Not True

89.(2)  $Z < T > U \geq V > W$

$T > U \geq V > W > X$

**Conclusions**

I.  $Z > X$  : Not True                      II.  $U > X$  : True

90.(5)  $P = N > D \geq G < B = J$

**Conclusions**

I.  $P > G$  : True                      II.  $G < J$  : True

91-95.

Candidate	CRITERIA					(B)
	(i)	(ii) or (A)	(iii)	(iv) or		
Anil Rath	✗	NG	-	✓	✓	-
Dr. Samil Bali	✓	✓	-	✓	-	✓
Vaishali Shetty	NG	-	✓	NG	-	✓
Vivek Jha	✓	✓	-	✓	✓	-
Dr. M Puri	✓	✓	-	✓	✓	✓

91.(2) Anil Rath does not satisfy criterion (I). There is no information about marks in Library and Information Science.

92.(4) Dr. Samil Bali does satisfy criteria (I), (II), (III) and (B). Therefore, he may be offered contractual appointment for one year.

93.(5) Vaishali Shetty does satisfy only criteria (A) and (B).

94.(1) Vivek Jha satisfies all the criteria.

95.(1) Dr. M Puri satisfies all the criteria.

96-100.

Logic is:-

In first step biggest letter is arranged from left hand side and in second step smallest number is arranged from left hand side and so on.....

96.(2)

97.(2)

98.(2)

99.(1)

100.(1)