SBI PO Preliminary Grand Test –SPP-170329

HINTS & SOLUTIONS

1.(1) Limited (Adjective) = restricted to a particular limit of time, place, numbers etc.
Look at the sentence :
This offer is limited to rural areas of this district.

2.(4)

3. (5) Pivotal (Adjective) = of great importance because other things depend on it.
Trivial (Adjective) = not important or serious; not worth considering.
Look at the sentences :
Mr. Modi plays a pivotal role in Indian politics.
I know it sounds trivial, but I am worried about it.

4.(2)

5.(2) Bind (Verb) = to tie; to unite people, organisation etc. so that they live or work together ; to associate.
Separate (Verb) = to divide into different parts.
Look at the sentences :
Organisations such as schools and clubs bind a community together.
It is impossible to separate belief from emotion.

6.(3) 7.(5)
8.(5)

9.(3) Regain (Verb) = to get back something you no longer have.
Forfeit (Verb) = to lose something.
Look at the sentences :
I struggled to regain some dignity.
He has forfeited his right to be taken seriously.

10.(3) 11.(5)
12.(1) 13.(2)
14.(4) 15.(4)
16.(4) 17.(1)
18.(3) 19.(5)
20.(2)

21.(2) For more than two things one another should be used Hence, have dragged one another's ..... should be used.

22.(2) In/with regard to some-body/something = concerning somebody/something.
Hence, with regard to the crisis in state .... should be used here.

23.(1) Here, the executives of companies or company executives are.....should be used.

24.(5)

25.(1) Here Active voice i.e. Our country is targeting/our country has targeted .... should be used.

26.(2) 27.(3)
28.(4) 29.(1)
30.(1)

31.(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.

32.(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.

33.(2) The given number series is based on the following pattern :
$1 = 1^4$; $16 = 2^4$;
$81 = 3^4$; $256 = 4^4$;
$625 = 5^4$; $1296 = 6^4$;
$\therefore ? = 7^4 = 7 \times 7 \times 7 \times 7 = \boxed{2401}$
Hence, 2401 will replace the question mark.

34.(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.

35.(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.

36.(1) $\sqrt{287}x + \sqrt{25} = 0 \Rightarrow 17x + 5 = 0 \Rightarrow x = -\frac{5}{17}$

$\sqrt{676}y + 10 = 0 \Rightarrow 26y + 10 = 0 \Rightarrow y = -\frac{5}{13}$

$\therefore x > y$

37.(2) $8x^2 - 78x + 169 = 0$

$\Rightarrow 8x^2 - 52x - 26x + 169 = 0$

$\Rightarrow 4x(2x - 13) - 13(2x - 13) = 0$

$\Rightarrow x = \frac{13}{2}, \frac{13}{4}$

$20y^2 - 117y + 169 = 0$

$\Rightarrow y = \frac{13}{4}, \frac{13}{5}$

$\therefore x \geq y$

38.(1) $\frac{15}{\sqrt{x}}+\frac{9}{\sqrt{x}}=11\sqrt{x}$

$\Rightarrow 24=11x \Rightarrow x=\frac{24}{11}\approx 2$

Similarly y = $\frac{3}{2}=1.5$

Clearly x > y.

39.(5) x = 13/2, 7, y = 7, 5/2.

40.(5) $x^2-208=233$

$\Rightarrow x^2=233+208=441\Rightarrow x=\pm 21$

$y^2-47+371=0x$

$\Rightarrow y^2-324=0\Rightarrow y=324\Rightarrow y=\pm 18$

Therefore relation cannot be established.

41.(3) Amount of IR Rays received in 1 minute

$=\frac{36}{100}\times 3600=360$ units

Maximum tolerable limit of IR rays = 9720 units

So, maximum time one can be exposed to the sun $=\frac{9720}{360}=27$ min.

42.(3) Beta rays in 1 minute of sunshine

$=\frac{5}{100}\times 3600=180$ units

Beta rays in 10 minutes of sunshine = 180 × 10 = 1800 units

IR rays in 1 minute of sunshine $=\frac{10}{100}\times 3600=360$ units

IR rays in 3 minutes of sunshine = 360 × 3 = 1080 units

Required ratio = $\frac{1800}{1080}$ i.e. 1.66 times.

43.(4) Beta rays in 1 minute $=\frac{5}{100}\times 3600=180$ units

Therefore 30 units of Beta rays = 1 units of vitamin D.

180 units of Beta rays = 6 units of vitamin D

1 minute of sunshine = 6 units of vitamin D

Therefore 40 units of vitamin D is generated in $6\frac{2}{3}$ minutes.

44.(3) Amount of gamma rays with ozone layer

$=\frac{5}{100}\times 3600=180$

This is 40% of gamma rays, therefore

$100\%=\frac{180}{40}\times 100=\frac{1800}{4}=450$

45.(1) 20 – 5 = 15

15% of 3600 = 540.

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

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

Hence, average number fo 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) ~ (780 + 700 + 660 + 840 + 720 + 660 + 740)

= 5090 ~ 5100 = 5100 – 5090 = 10.

51.(3) Ratio of equivalent capitals of A, B and C for 1 month = 13600 × 12 : 17600 × 8 : 15200 × 8 = 136 × 12 : 176 × 8 : 152 × 8 = 51: 44 : 38

Sum of ratios = 51+ 44 + 38 = 133

$\therefore$ C's share = $\frac{38}{133}\times 46550$

= Rs. 13300

52.(1) Principal = Rs. P

Interest = Rs. $\frac{9}{16}$P

Rate = R% per annum

Time = R years

Rate = $\frac{\text{S.I.}\times 100}{\text{Principal}\times\text{Time}}$

R = $\frac{9}{16}\times\frac{100}{R}$

$\Rightarrow R^2=\frac{900}{16}\Rightarrow R=\frac{30}{4}$

= 7.5% per annum

53.(1) Total cost of 25 kg of rice = Rs. (10 × 30 + 36 × 15) = Rs. (300 + 540) = Rs. 840

Total S.P. for a profit of 20% =

$=\frac{840\times 120}{100}=\text{Rs.}1008$

$\therefore$ Rate = $\frac{1008}{25}$ = Rs. 40.32/kg

54.(1) Area of square = 24 × 24 = 576 sq.cm.

$\therefore$ Area of rectangle = $\frac{576}{2}$ = 288 sq.cm.

Length of rectangle =24 – 4 = 20 cm

$\therefore$ Its breadth = $\frac{288}{20}$ = 14.4 cm

$\therefore$ Perimeter of rectangle = 2 (1+ b)

= 2(20 + 14.4) = 2 × 34.4 = 68.8 cm

55.(3) Remaining quantity of milk = Original quantity

$$= \left(1-\frac{\text{Quantity taken out}}{\text{Total initial amount}}\right)^n$$

$$= 80\left(1-\frac{16}{8}\right)^2 = 80\left(1-\frac{1}{5}\right)^2$$

$$= \frac{80\times 4\times 4}{5\times 5} = 51.2\text{litres}$$

Quantity of water = 80 - 51.2 = 28.8 litres

Required ratio = 51.2 : 28.8 = 16 : 9

56.(5) Efficience :

1st group = 2nd group

2 m × 1 hr. = 3 m × 1.5 hr.

4m = 9M

Or 38m = 9/4 × 38M = 9/2 × 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.

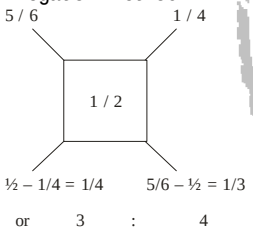
57.(3) Let two angles of triangle be 5x, 7x

Third angle = 2/3 ×180° = 120°

120° +5x+7x = 180 => X = 5°

Second largest angle =7x = 7 × 5 = 35°

58.(4) Allegation method



or 3 : 4

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

CP of first cow = (750 – x)

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

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

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

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

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

From question,

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

Or, x = 2y = 3.(2189 – x – y)

From above, we get, x = Rs.1194, y = Rs.597

Third part (2189 – x – y) = Rs.398.

61.(1) $? = \frac{5555}{50} = 111.1$

∴ Required answer = 110

62.(1) $? = (18)^3 = 5832$

63.(3) $? = 23\times 19\times 18 = 3496$

∴ Required answer = 3500

64. (4) $? = \frac{10000}{100\times 10} = 10$

∴ Required answer = 11

65.(2) $? = \frac{450\times 22}{100} = 99$

∴ Required answer = 100

(66-70)

# ⇒<	© ⇒>	% ⇒=
$ ⇒≥	@ ⇒≤	

66.(4) R@D ⇒ R ≤ D

D©W ⇒ D >W

B $ W ⇒ B ≥ W

Therefore,

R ≤ D ⇒ W ≤ B

Conclusions

I. W # R ⇒ W < R : Not true

II. B © D ⇒ B > D : Not True

III. W$ R ⇒ W ≥ R : Not True

W is either smaller or greater than or equal to R.

67.(3) H $ V ⇒ H ≥ V

V % M ⇒ V = M

K ©M ⇒ K >M

Therefore, H ≥ V = M < K

Conclusions

I. K©V ⇒ K > V : True

II. M@H ⇒ M ≤ H:True

III. H©K ⇒ H > K: Not True

68.(1) K # T ⇒ K < T

T $ B ⇒ T ≥ B

B @ F ⇒ B ≤ F

Therefore, K < T ≥ B ≤ F

Conclusions

I. F $ T ⇒ F ≥ T : Not True

II. K # B ⇒ K < B : Not True

III.T$ F ⇒ T ≥ F : Not True

69.(1) Z # F ⇒ Z < F

R @ F ⇒ R ≤ F

D ©R ⇒ D > R

Therefore,

Z < F ≥ R < D

Conclusions

I. Z # R ⇒ Z < R : Not True

II. F # D ⇒ F < D : Not True

III. D© Z ⇒ D > Z : Not True

70.(2) M©R ⇒ M > R

R % D ⇒ R = D

D @ N ⇒ D ≤ N

Therefore,

M > R = D ≤ N

Conclusions

I. M©N ⇒ M >N : Not True

II. N $ R ⇒ N ≥ R : True

III.M © D ⇒ M > D : True

(71 - 73) :

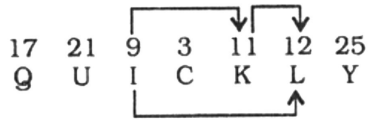
K is the brother of B and S.
L is the father of K, B and S.
L is the husband of Y.
D is husband of T.

71.(5) J is married to C.
There is no information about the gender of either J or C.
Therefore, J is either brother-in-law of P.

72.(3) S is the sister of D.
T is the wife of D.
Therefore, T is the sister-in-law of S.

73.(1) D is the father of Z.
B is the brother of D.
Therefore, B is the uncle of Z.

74.(4)



75. (2)

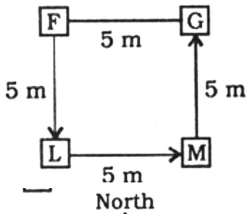
76.(1) From statement I

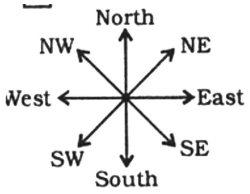
mold now mold today → ry kr kr yj

The code for 'mold' is 'kr',
From statement II
mold it now please → td kr ds ry
No answer.

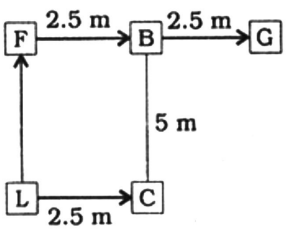
77.(5) From statement I
Examination was over at 11:00AM
From statement II
9 : 30 AM + Less than 2 hours From both the statements
Duration of the Examination 11 : 00AM - 9 : 30AM
= 1 : 30 hours

78.(3) From statement I



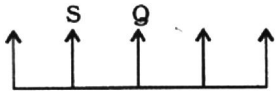


From statement II

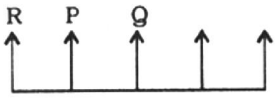


79.(2) From statement I
Riya stayed on Wing 1 or 4
From statement II
Riya stayed on Wing 4.

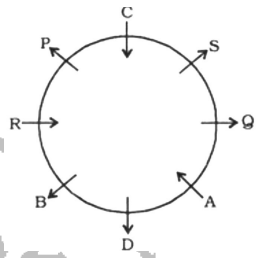
80.(3) From statement I



From statement II

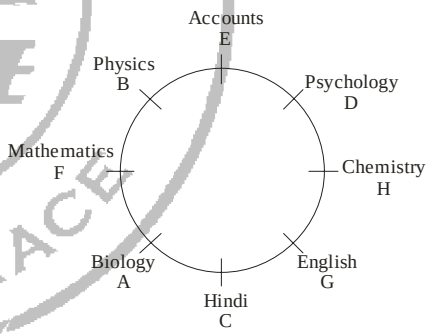


(81-85) :



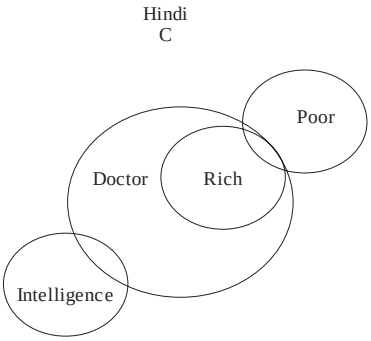
81.(5) Except A, all others face outside.
82.(2) D sits third to the right of S.
83.(1) B sits third to the right of Q.
84.(3) A, C and R face the centre.
85.(4) P sits to the immediate left of R.
R sits between B and P when counted from the right of B.

86-90.



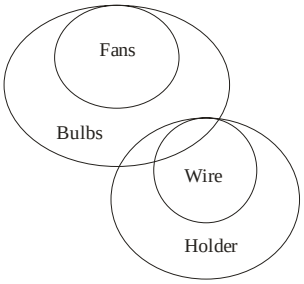
86.(2) 87.(4)
88.(1) 89.(3)
90.(2)

91-92.

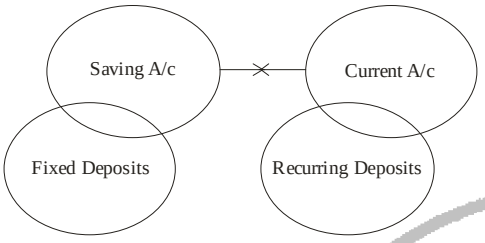


91.(2) 92.(5)

93.(2)



94-95.



94.(4)
95.(5)

(96-100) :

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

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

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

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

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

100.(1) Dr. M puri satisfies all the criteria.