<u>IBPS PO PRELIMINARY GRAND TEST :</u> <u>IPP-170752 - HINTS AND SOLUTIONS</u>

ANSWER KEY

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

- 1. (5) The third sentence of the passage supports (C). The last sentence of the second paragraph (starting with the word pollution) supports (A). The first sentence of the fourth paragraph supports (B).
- 2. (1) The last two sentences of the second last paragraph gives us the answer.
- 3. (5) The answer is quite obvious from the passage.
- 4. (2) The first half of the third last paragraph gives us the answer.
- 5. (3) The second sentence of the passage supports (C).
- 6. (4) The second half of the third last paragraph gives us the answer.
- 7. (2) The answer can be easily inferred from the passage.
- 8. (4) The second half of the third paragraph (starting with poverty) gives us the answer.
- 9. (4) In the passage surveillance means having careful watch. So, observation is most similar to it.
- 10. (3) In the passage prerequisite means something that must exist or happen. So, necessity is most similar to it.

- **11.** (3) Add 'of' before kicked out.
- **12.** (3) Replace 'carry' with 'carrying'/
- **13.** (4) Add 'as' before an oblique.
- **14.** (1) Add 'to' before preserve
- **15.** (2) Add 'the' before oppressed
- 31. (1) Let the amount is $\top x$.

1

According to the question, $\frac{3}{9}x - \frac{2}{14}x = 40$

$$\Rightarrow x \left(\frac{1}{3} - \frac{1}{7}\right) = 40 \Rightarrow x \times \frac{4}{21} = 40$$
$$\Rightarrow x = \frac{21 \times 40}{4} = 210 \Rightarrow x = T210$$

- 32. (3) According to the questions, Rachita buys highest number of pastries, then Cookies and then ice cream. She has to buy 9 units of each
 - \therefore Pastries > Cookie > ice cream

But she has to buy total 32 units and each item of one unit is must.

 \therefore Pastries > Cookies > Ice - cream 13 or 12 10 or 11

9

Hence, she can buy either 10 or 11 units of cookies. Bus fare of first 5 km = T x

Bus fare of first 1 km = $T \frac{x}{5}$

According to the question,
$$5 \times \frac{x}{5} + 182 \times 13 = 2402$$

$$\Rightarrow x + 2366 = 2402$$
$$\Rightarrow x = 2402 - 2366 = 36$$

$$\Rightarrow$$
 x = \top 36

33. (3)

34. (1)

35. (1)

Let three even numbers are x, (x + 2) and (x + 4) \therefore According to the question,

 $x(x + 2) (x + 4) = 4032 \qquad \dots(i)$ And $x(x + 4) = 252 \qquad \dots(ii)$ $\Rightarrow (x + 2)252 = 4302 \qquad [Form Eq. (ii)]$ $\Rightarrow (x + 2) = \frac{4302}{252} = 16$ $\Rightarrow x + 2 = 16 \Rightarrow x = 16 - 2 = 14$ $\Rightarrow x = 14$ $\therefore Numbers are 14, (14 + 2) and (14 + 4)$ i.e., 14, 16 and 18 Now, five times of second number = $16 \times 5 = 80$ Sum of ages of 4 members of a family 5 yr ago = 94 yr Their present age with daughter

Then present age with daughter = $94 + 4 \times 5 = 94 + 20 = 114$ yr Now, their present age with daughter - in - law = 92 yr ∴ Difference between daughter and daughter-in-law = 114 - 92 = 22 yr The balance of the large state of the larg

36. (4) Total ball in the bag =
$$13 + 7 = 20$$

:
$$n(S) = {}^{20}C_2 = \frac{20!}{2!8!} = \frac{20 \times 19 \times 18!}{2 \times 18!} = 190$$



38. (4)

2

41.

And for some colour of ball

$$n(E_1) = {}^{13}C_2 = \frac{13!}{2!11!} = \frac{13 \times 12}{2} = 78$$

and
$$n(E_2) = {^7C_2} = \frac{7!}{2!5!} = \frac{7 \times 6 \times 5!}{2 \times 5!} = \frac{7 \times 6}{2} = 21$$

. Required probability for same colour of ball

$$P(E) = \frac{n(E_1) + n(E_2)}{n(S)} = \frac{78 + 21}{190} = \frac{99}{190}$$

37. (2) Akash scored in Subject A = 73 marks Akash scored in Subjetc B

$$= 56\% \text{ of } 150 = 150 \times \frac{56}{100} = 84 \text{ marks}$$

Akash scored in Subject C = X marks Maximum marks of all three subjects is 150. \therefore Total marks = $150 \times 3 = 450$ Now, according to the question Marks obtained in Subject A + Marks obtained in Subject B + Marks obtained in Subject C = 54% of total marks

$$\Rightarrow 73 + 84 + X = 450 \times \frac{54}{100}$$

$$\Rightarrow X + 157 = 243$$

$$\Rightarrow X = 243 - 157 = 86$$

$$\Rightarrow X = 86$$

Hence, Akash scored 86 marks in Subject C.
Area of square = 1444 m²

 \therefore Side of square = $\sqrt{1444}$ = 38 m Now, according to the question,

Breadth of rectangle =
$$38 \times \frac{1}{4}$$
 m

And length of rectangle = $38 \times \frac{3}{4}$ m

Area of Length of rectangle = length Breadth

$$=38 \times \frac{1}{4} \times 38 \times \frac{1}{4} = 1444 \times \frac{3}{16} \text{ m}^2$$

Now, difference between area of square and rectangle = Area of square - Area of rectangle

$$=1444 - 1444 \times \frac{3}{16} = 1444 \left(1 - \times \frac{3}{16}\right) = 1444 \times \frac{13}{16}$$
$$= 1173.5 \text{ m}^2$$

39. (5) Share of A =
$$\frac{4}{11} \times 73689$$
 = Rs. 26796

Share of B =
$$\frac{7}{11}$$
×73689 = Rs. 46893
∴ Required difference
= 2 × Share of B – 3 × Share of A

$$= 2 \times \text{Share of B} - 3 \times \text{Share}$$

$$= 2 \times 46893 - 3 \times 26796$$

$$= 93786 - 80388 = 13398 = 13398$$

40. (4) According to the question,

$$\frac{1}{A} + \frac{1}{B} = \frac{1}{20} \qquad \dots(i)$$
$$\frac{1}{B} + \frac{1}{C} = \frac{1}{20} \qquad \dots(ii)$$

B C 30
and
$$\frac{1}{1} + \frac{1}{1} = \frac{1}{1}$$
 (iii)

$$\begin{array}{c} \text{and} \mathbf{C} \quad \mathbf{A} \quad 40 \qquad \dots (\mathbf{m}) \\ \text{and} \quad \mathbf{C} \quad \mathbf{A} \quad 40 \qquad \dots (\mathbf{m}) \\ \text{and} \quad \mathbf{C} \quad \mathbf{A} \quad \mathbf{C} \quad \mathbf$$

$$2\left(\frac{1}{A} + \frac{1}{B} + \frac{1}{C}\right) = \frac{1}{20} + \frac{1}{30} + \frac{1}{40}$$

$$\Rightarrow \frac{1}{A} + \frac{1}{B} + \frac{1}{C} = \frac{13}{240}$$
 ...(iv)

Subtracting Eq. (ii) from Eq. (iv), we get

$$\frac{1}{A} = \frac{13}{240} - \frac{1}{30} = \frac{5}{240} = \frac{1}{48}$$

 \Rightarrow A = 48 days Now, subtracting Eq. (i) from Eq. (iv), we get

$$\frac{1}{C} = \frac{13}{240} - \frac{1}{20} = \frac{1}{240}$$

$$\Rightarrow C = 240 \text{ days}$$

:. Required ratio = 48 : 240 = 1 : 5.

Income of A and B in 2004 = 28 + 25 = 53 lakh. (2)Income of A and B in 2003 = 16 + 15 = 31 lakh. Difference = 53 - 31 = 22 lakh.

42. (2) A's profit % in
$$2003 = \frac{12}{16 - 12} \times 100 = 300\%$$

B's profit % in
$$2002 = \frac{6}{10-6} \times 100 = 150\%$$
.
Difference = $300 - 150 = 150\%$.

43. (1) In 2000 - A's profit% =
$$\frac{12}{15-12} \times 100 = 400\%$$

In 2001 - A's profit % =
$$\frac{10}{20-10} \times 100 = 100\%$$

In 2002 - A's profit % =
$$\frac{12}{12-8} \times 100 = 300\%$$

In 2003 - A's profit % =
$$\frac{12}{16-12} \times 100 = 300\%$$

In 2004 - A's profit % =
$$\frac{10}{28-10} \times 100 = 55.5\%$$

In 2000 A's profit % is maximum.

44. (3) Total profit of A and B in 2000 = 12 + 9 = 21 lakhs. Total profit of A and B in 2003 = 12 + 8 = 20 lakhs Their difference = 21 - 20 = 1 lakh.

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45. (4) Average of A income in 2001 and B in 2004

$$=\frac{20+25}{2}=22.5$$
 lakh

46. (4) In 2008 -
$$\frac{1-0.9}{0.9} \times 100 = 11.11\%$$

In 2009 - $\frac{1-0.5}{0.5} \times 100 = 100\%$
In 2010 - $\frac{1-0.8}{0.8} \times 100 = 25\%$
In 2011 - $\frac{1-0.3}{0.3} \times 100 = 233.33\%$
In 2012 - $\frac{1-0.6}{0.6} \times 100 = 66.66\%$
In 2013 - $\frac{1-0.4}{0.4} \times 100 = 150\%$
47. (4)
48. (2) 'B' in 2008 - $\frac{E_1}{I_1} = \frac{0.8}{1} = \frac{8}{10} \Rightarrow E_1 = \frac{8}{10}I_1$
·B' in 2012 - $\frac{E_2}{I_2} = \frac{0.8}{1} = \frac{8}{10} \Rightarrow E_2 = \frac{8}{10}I_2$
 $\therefore \frac{8}{10}I_1 + \frac{8}{10}I_2 = 60 \Rightarrow I_1 + I_2 = \frac{60\times10}{8} = 75$ lakhs
49. (2) From '46' solution, 'C' gains 100% profit in 2009.
(1) C's profit % in 2010 = 25%
Required % = $\frac{100-25}{100} \times 100 = 75\%$.
51. (2) $\frac{40000 \times 12 \times 19 \times 55}{100 \times 20 \times 100} = 2508$
52. (2) 2800 : 2000 = 7 : 5
53. (4) 4400 + 3200 = 7600
54. (5) $\frac{(4560 + 4400 + 4400 + 2800 + 3200 + 3600)}{6}$
 $\Rightarrow \frac{22960}{6} = 3826.66$
55. (3) (3040 + 4400 + 2800) = 10240
56. (3) I. $\sqrt{289x} + \sqrt{25} = 0$
 $\Rightarrow \sqrt{289x} = -\sqrt{25}$
Squaring both sides, we get $289x = 25$
 $x = \frac{25}{289}$

II. $\sqrt{676y} + 10 = 0$ $\Rightarrow \sqrt{676y} = -10$ Squaring both sides, we get 696y = 100 $y = \frac{100}{676}$ $\therefore y > x$ I. $8x^2 - 78x + 169 = 0$ 57. (2) $\Rightarrow 8x^2 - 52x - 26x + 169 = 0$ $\Rightarrow 4x(2x-13) - 13(2x-13) = 0$ $\Rightarrow (2x - 13) (4x - 13) = 0$ $\therefore x = \frac{13}{2} \text{ or } \frac{13}{4} = 6.5 \text{ or } 3.25$ II. $20y^2 - 117y + 169 = 0$ $\Rightarrow 20y^2 - 52y - 65y + 169 = 0$ $\Rightarrow 4y(5y-13) - 13(5y-13) = 0$ $\Rightarrow (5y - 13) (4y - 13) = 0$ \therefore y = $\frac{13}{5}$ or $\frac{13}{4}$ = 2.6 or 3.25 $\therefore x \ge y$ 58. (1) I. $\frac{15}{\sqrt{x}} + \frac{9}{\sqrt{x}} = 11\sqrt{x}$ $\Rightarrow \frac{15+9}{\sqrt{x}} = 11\sqrt{x} \Rightarrow 24 = 11x$ $\mathbf{OFRA}^{\mathbf{C}\mathbf{V}} \therefore \mathbf{x} = \frac{24}{11}$ II. $\frac{\sqrt{y}}{4} + \frac{5\sqrt{y}}{12} = \frac{1}{\sqrt{y}}$ $\Rightarrow \frac{3\sqrt{y} + 5\sqrt{y}}{12} = \frac{1}{\sqrt{y}} \Rightarrow 8y = 12$ $\Rightarrow y = 1.5 = 2.18$ $\therefore x > y$ 59. (1) I. $\frac{8}{\sqrt{x}} + \frac{6}{\sqrt{x}} = \sqrt{x}$ $\Rightarrow \frac{14}{\sqrt{x}} = \sqrt{x} \Rightarrow x = 14$ II. $y^3 - \frac{(14)^2}{\sqrt{y}} = 0$ or, $y^3 = \frac{(14)^2}{\sqrt{y}}$ $\Rightarrow y^{3+\frac{1}{2}} = (14)^2 \Rightarrow y^{\frac{7}{2}} = (14)^2$ $\therefore x > y$



(1) Let the length of Train B = x m60.

Then the length of Train A = $\frac{x}{2}$ m

Speed of Train A =
$$\frac{\frac{x}{2}}{25} = \frac{x}{50}$$

Speed of Train B = $\frac{x}{75}$

Ratio of speed
$$= \frac{A}{B} = \frac{\frac{x}{50}}{\frac{x}{75}} = \frac{75}{50} = 3:2$$

61. (3) Let 100 cm read as 103 cm. Area = 100×100 sq. cm. = 10000 sq. cm. and New Area = $103 \times 103 = 10609$ sq. cm.

% required =
$$\frac{10609 - 10000}{10000} \times 100 = 6.09\%$$

(2) Let original length = 100, breadth = 10062. After lost length = 88, breadth = 85. Area of original = $100 \times 100 = 10000$ After lost area = $88 \times 85 = 7408$.

Required % =
$$\frac{10000 - 7408}{10000} \times 100 = 25.92\%$$
.

(3) Let length = x m. 63.

Breadth =
$$\frac{45}{100} \times x = \frac{9}{20}x$$
 m

Perimeter of rectangle = 2(l + b) = 1160

$$\Rightarrow 2\left(x + \frac{9}{20}x\right) = 1160$$

 \Rightarrow x = 400 m

Length = 400, breadth = $\frac{9}{20} \times 400 = 180$.

Area of rectangle = $400 \times 180 = 72000 \text{ m}^2$.

- 64. (2) Area of room = $840 \text{ cm} \times 408 \text{ cm} = 342720 \text{ cm}^2$ From options required square tiles = 595.
- (4) Let length = 5x, Breadth = 3x65.

Perimeter of rectangle, $2(5x + 3x) = 15 \times \frac{9.6}{60}$

$$\Rightarrow 2 \times 8x = 2.4 \text{ km}$$

$$\Rightarrow$$
 x = $\frac{2.4 \times 1000}{16}$ = 150 m

Length = $150 \times 5 = 750$ m; Bredth = $3 \times 150 = 450$ m \therefore Area of rectangle = 750 × 450 m² = 337500 m².

71. (5) Twelfth to the left of twenty first from the left means 9th from the left = F

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72. (4) According to question, the arrangements are as follows.

 $B @ D A © F \% | R | H E * N $ U W P T \delta V # Y I$

So, R is 15th from right.

- 73. (3) Symbols — Consonant — Vowel @ D A # Y I
- 74. (5) Star mark (8) is between E and N.
- 75. (2) So, WPU does not belong to group.

76-80.

76.

78.

83

87.

Fri ends	B an ks	Working area		
А	S	Forex officer		
В	М	Agriculture officer		
С	Ν	Economist		
D	L	Terminal operator		
Е	R	IT officer		
F	Q	Clerk		
G	Р	Research analyst		

80. (2)
81. (2)
$$O < M \le N \ge K > L$$

 $N > L$ is true

(2)

(1)

(2)

$$\begin{array}{cc} (4) & B < F = C < D < A \\ & \text{or} \end{array}$$

$$\mathbf{B} < \mathbf{F} = \mathbf{C} = \mathbf{D} < \mathbf{A}.$$



- K B L 5 A 6 7 Z 2 R Q A 5 9 85. (4)
- From I We can't determine the position of P with 86. (1) respect to T. From II -



P is second to the left of T. Hence II alone sufficient. (3) From I –

Mukesh's rank = 44^{th} from the bottom.

 \therefore Raju's rank = 44 + 12 = 56th from the bottom. From top = $80 - 56 + 1 = 25^{\text{th}}$

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From II -Roshan's rank = 30^{th} from bottom. Raju's rank = $30 - 8 = 22^{nd}$ from bottom. Raju's rank from top = 80 + 1 - 22 = 59

- (5) From I and II, amazing = vo 88.
- (5) From I S R P and Q so, I alone is not sufficient. 89. From II - S - P - Q and S is heaviest. From I and II = S - R - P - Q
- (4) From I 90.







- Lowest number $183 \Rightarrow 813$
- 92. (2) Second lowest number 479 So, second digit of the number = 7
- 93. (3) Second highest number 792 Sum of first and third digit = 7 + 2 = 9
- 94-95. Six friends marks descending order (>) are as follows. B > D > F > C > E > A
- 94. (1) Given, third highest marks = 81And E's marks = 62C's score marks between 62 and 81. Hence, C's possible marks = 70.
- 95. (5) None is true with respect to the given information.



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