IBPS PO Preliminary Grand Test –IPP-171015

HINTS & SOLUTIONS

ANSWER KEY

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

HINTS & SOLUTIONS

31. $\frac{5}{7}\times\frac{2856}{17}+x=\frac{3024}{24}+111$
$120+x=126+111$
$x=237-120$
$x=117$

32. $\frac{4212}{x}=\frac{x}{832}\Rightarrow x^2=4212\times 832$
$\Rightarrow x^2=3504384$
$\Rightarrow x=1872$

33. $1196\times 0.85+\frac{18}{100}\times 2370=x$
$1016.6+426.6=x$
$\Rightarrow x=1443.2$

34. $\frac{\sqrt{6084}}{0.13}-586=\sqrt[3]{x}$
$\frac{7800}{13}-586=\sqrt[3]{x}$
$600-586=\sqrt[3]{x}\Rightarrow x=2744$

35. $\frac{3846}{6}+\sqrt{1156}=\frac{x}{100}\times 5625$
$\Rightarrow 56.25x=641+34$
$x=\frac{675}{56.25}$
$x=12$

36. $3\times 1+7=10$
$10\times 2-6=14$
$14\times 3+5=47$
$47\times 4-4=184$
$184\times 5+3=923$

37. 4, 9, 18, 35, 68, 133
+5, +9, +17, +33, +65
+4, +8, +16, +32

38. $1\times 1^2+1=2$
$2\times 2^2+3=11$
$11\times 3^2+5=104$
$104\times 4^2+7=1671$
$1671\times 5^2+9=41784$

39. 1296, 1179, 1087, 1018, 970, 941
-117, -92, -69, -48, -29
+25, +23, +21, +19

40. 10, 20, 34, 52, 74, 100
+10, +14, +18, +22, +26

41. $2x^2-5x+3=0$
$2x^2-2x-3x+3=0$
$2x(x-1)-3(x-1)=0$
$(x-1)(2x-3)=0$
$x=1, x=\frac{3}{2}$
$\therefore x\geq y$

$y^2=1$
$y=\pm 1$

42. $x=\sqrt{361}$
$x=19$
$\therefore x>y$

$y=\sqrt[3]{5832}$
$y=18$

43. $21x^2+44x+15=0$
$21x^2+35x+9x+15=0$
$7x(3x+5)+3(3x+5)=0$
$(3x+5)(7x+3)=0$
$x=\frac{-5}{3}, x=\frac{-3}{7}$
$\therefore x<y$

$56y^2+15y+1=0$
$56y^2+7y+8y+1=0$
$7y(8y+1)+1(8y+1)=0$
$(8y+1)(7y+1)=0$
$y=\frac{-1}{8}, y=\frac{-1}{7}$

44. $3x^2+14x+16=0$
$3x^2+6x+8x+16=0$
$3x(x+2)+8(x+2)=0$
$(x+2)(3x+8)=0$
$x=-2, x=\frac{-8}{3}$
$\therefore x\leq y$

$y^2+3y+2=0$
$y^2+2y+y+2=0$
$y(y+2)+1(y+2)=0$
$(y+2)(y+1)=0$
$y=-2, y=-1$

45. $x = \sqrt{13.69}$ $\quad 3y^2 - 8y - 16 = 0$
$x = 3.7$ $\quad 3y^2 - 12y + 4y - 16 = 0$
$3y(y-4) + 4(y-4) = 0$
$(3y+4)(y-4) = 0$
$y = \frac{-4}{3}, y = 4$
$\therefore$ Relationship cannot be established

46. Sale of Company 'A' = $\frac{64}{100}$ x 42300 = 27072

Sale of Company 'B' = $\frac{60}{100}$ x 57800 = 34680

Total sale of A and B = 27072 + 34680 = 61752

47. Sale of Company 'D' = $\frac{55}{100}$ x 37500 = 20625

Not Sale in Company 'D' = 37500 – 20625 = 16875
Difference between sold in 'D' and unsold in 'D'
= 20525 – 16875 = 3750.

48. Sale of Company 'E' = $\frac{76}{100}$ x 64700 = 49172

Sale of Company 'C' = $\frac{45}{100}$ x 51400 = 23130

Their difference = 49172 - 23130 = 26042

49. Total production of Company 'D' = 37500

Sale of Company 'F' = $\frac{68}{100}$ x 72800 = 49504

Required % = $\frac{37500}{49504}$ x 100 = 75.75%

50. Sold in Company 'B' = $\frac{60}{100}$ x 57800 = 34680

Unsold in Company 'B' = 57800 – 34680 = 23210
Sold in Company 'A' = 27072
Unsold in Company 'A' = 42300 – 27072 =15228

Required % = $\frac{23210 - 15228}{15228}$ x 100 = 52.41% $\simeq$ 52%

51. $\frac{18.6}{100}$ x 127000 = 23622

52. T. O.I readers in City 'B' = $\frac{34.4}{100}$ x 138000 = 47472

Hindu readers in City 'E' = $\frac{22.4}{100}$ x 108000 = 24192

Their difference= 47472 – 24192 = 23280

53. Telegraph readers in City 'E' = $\frac{19.2}{100}$ x 108000 = 20736

Telegraph readers in City 'D' = $\frac{20.2}{100}$ x 149000 = 30098

Required % = $\frac{20736}{30098}$ x 100 = 68.88% $\simeq$ 69%

54. Total no. of H.T readers
23622 + 29256 + 29120 + 46786 + 30348 = 159132

55. T. O.I readers in City 'D' = $\frac{33.8}{100}$ x 149000 = 50362

Hindu readers in City 'A' = $\frac{31.5}{100}$ x 127000 = 40005

Required % = $\frac{50362 - 40005}{40005}$ x 100 = 25.80% $\simeq$ 26%

56. Let C.P = x $\quad$ Profit % = $\frac{4}{75}$ x%

S.P = $\frac{\left(100 + \frac{4}{75}\right)}{100} \times x = 981$

$\Rightarrow x^2 + 1875x - 1721250 = 0$
$\therefore x = 675$

57. S.I = 2380
P = x, T = 4, R = R
Amount = 2380
S.I = 2380 – x

$2380 - x = \frac{x \times 4 \times R}{100}$ ..... (1)

P = x
T = 4
R = $\frac{130}{100}$ x R
Amount = 2584
S.I = 2584 -x

$\Rightarrow 2584 - x = \frac{x \times 4 \times \frac{130}{100} R}{100}$

$\Rightarrow (2584-x)\frac{130}{100} = \frac{x \times 4 \times R}{100}$ ..... (2)

Equation (1) = (2)
R = 10% P = 1700

58. $16247 = P\left[\left(1 + \frac{11}{100}\right)^2 - 1\right]$

$\Rightarrow$ P = 70000

S.I = $\frac{70000 \times 11 \times 2}{100}$ =15400

59. Let milk = 9x, Water = 4x
9x + 4x = 1677
$\Rightarrow$ 13 x = 1677
x = 129
milk = 1161, water = 516

$\Rightarrow \frac{1161}{516 + y} = \frac{9}{7}$
$\Rightarrow$ 8127 = 4644 + 9y
$\Rightarrow$ y = 387

60. Present age of father = x
Present age of son = y
12 years ago : x -12 = 6(y -12) .....(1)
12 years after : x +12 = 2.25(y +12) .....(2)
From (1) and (2)
y = 20, x = 60

61. $^7P_3 = \frac{7!}{(7-3)!}$

$\Rightarrow \frac{7 \times 6 \times 5 \times 4}{4!}$ = 7 x 6 x 5 = 210

62. $\Rightarrow \frac{^8C_1}{^{20}C_1} = \frac{8}{20} = \frac{2}{5}$

63. Let C.P of Bat = x
C.P of Ball = y
1.12x + 1.16y = 1966 .....(1)
1.16x + 1.12y = 2024 .....(2)
From (1) and (2)
Bat = 1600 , Ball = 150
$\therefore$ Total = 1750

64. $T = \frac{d}{speed}$

$9 = \frac{18}{upstream.speed} + \frac{36}{downstream.speed}$

Let $\frac{1}{up.speed} = x$, $\frac{1}{down.speed} = y$

$\Rightarrow 18x + 36y = 9$

$\Rightarrow 2x + 4y = 1$ .....(1)

$10 = \frac{15}{up.speed} + \frac{60}{down.speed}$

$\Rightarrow 15x + 60y = 10$

$\Rightarrow 3x + 12y = 2$ ....(2)

From (1) and (2)

Up.speed = 3, Down Speed = 12

Speed of current = $\frac{12-3}{2}$ = 4.5 kmph.

65. $6M + 15W = \frac{7350}{7} = 1050$ ... (1)

$10M + 5W = \frac{10450}{11} = 950$ ...(2)

From (1) and (2)

1 men = 75, 1 Woman = 40

∴ 8 men= 600 , 8 Women = 320

Required Answer = $\frac{19320}{600+320}$ = 21 Days

66 – 70.

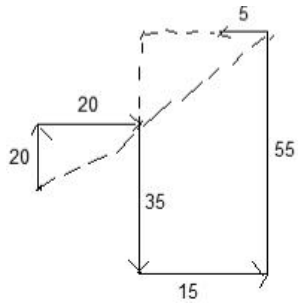
White	Orange	Red
A	F	D
I	I	I
I	I	I
C	B	E
Yellow	Green	Blue

66.(2) 67.(4)

68.(3) 69.(4) 70.(4)

71. (3) 72. (3)

73.



74. (4)

75. $\frac{66}{3} \times 11 - 12 = \frac{1150}{5}$

230 = 230

77. A < B < C ≤ D > E = F

i. D > B True

ii. F < D True

iii. C > A True

78. = / ≤ , > , <

A = B < C, A ≤ F ≤ E < D

All statements are true

79. Q < S ≥ K > V = I

i. Q > I False

ii. V < S True

iii. K > Q False

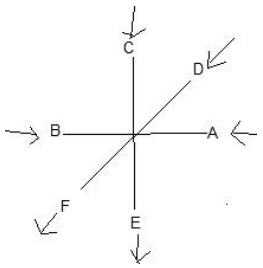
80. B = L < N > U ≤ O = F > R

i. B ≤ F – False

ii. F U – Fals

iii. N < B – False

81 – 83.



81. (3) 82. (3) 83. (4)

84 – 87.

I. 25 75 shown win 86 63 lower 59 nerves dog 47 32 cow bowl

II. 32 25 75 shown win 86 63 lower 59 nerves dog 47 bowl cow

III. 47 32 25 75 shown win 86 63 lower 59 nerves bowl cow dog

IV. 59 47 32 25 75 shown win 86 63 nerves bowl cow dog lower

V. 63 59 47 32 25 75 shown win 86 63 bowl cow dog lower nerves

VI. 75 63 59 47 32 25 win 86 bowl cow dog lower nerves shown

VII. 86 75 63 59 47 32 25 bowl cow dog lower nerves shown win

84. (3) 85. (4)

86. (3) 87. (3)

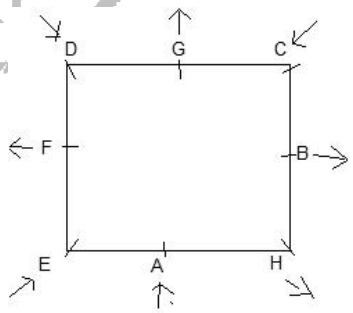
88. (5) Cannot find answer

89. From (ii) and (iii)

90. From (ii) and (iii)

91.(5)

96 – 100.



96. (5) 97. (1)

98. (4) 99.(1) 100.(4)