

**IBPS PO Preliminary Grand Test –IPP-171016**
**HINTS & SOLUTIONS**
**ANSWER KEY**

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

**HINTS & SOLUTIONS**

31. Let length =  $x$   
 Width =  $\frac{65}{100}(x) = \frac{13}{20}x$   
 Area of the rectangle = length  $\times$  breadth = 2340  
 $\Rightarrow x \times \frac{13}{20}x = 2340$   
 $\Rightarrow x^2 = 3600 \Rightarrow x = 60$   
 Length = 60, Width =  $\frac{65}{100} \times 60 = 39$   
 Difference between length and width  
 =  $60 - 39 = 21$  metre
34. Cylinder diameter = 22,  $r_1 = 11$ ,  $h_1 = 13.75$  m  
 Volume of the cylinder  
 =  $\pi r^2 h = \frac{22}{7} \times 11 \times 11 \times 13.75 = 5228.92857$   
 Let  $r_1$  and  $r_2$  are the internal and external radius of embankment.  
 Let  $h_1$  and  $h_2$  are the heights of the well and embankment.  
 $r_2 = r_1 + \text{embankment}$ ,  $r_2 = r_1 + 8.25 = 11 + 8.25 = 19.25$ l.  
 Volume of embankment = volume of the well

$$(\pi r_2^2 - \pi r_1^2) h_2 = \pi r_1^2 h_1$$

$$\pi((19.25)^2 - (11)^2) \times h_2 = \pi \times (11)^2 \times 13.25$$

$$h_2 = 6.66\text{m}$$

35. Volume of cylinder =  $\pi r^2 h$ ; Volume of Sphere =  $\frac{4}{3} \pi r^3$

Let no. of spheres = 'n',  $r = 3$  cm (cylinders),  
 $r = 4.5$ (sphere)

$$\Rightarrow \pi r^2 h = \frac{4}{3} \pi r^3 \times n$$

$$\Rightarrow 3 \times 3 \times 94.5 = \frac{4}{3} \times 4.5 \times 4.5 \times 4.5 \times n \Rightarrow n = '7'$$

36. LCD TV produced by company 'B'

$$= \frac{13}{100} \times 3646500 \times \frac{11}{17} = 306735$$

37. LED TV produced by company 'C'

$$= \frac{21}{100} \times 3646500 \times \frac{11}{15} = 561561$$

LCD TV produced by company 'C'

$$= \frac{21}{100} \times 3646500 \times \frac{4}{15} = 204204$$

$$\text{Their difference} = 561561 - 204204 = 357357$$

38. LED TV produced by 'A' =  $\frac{15}{100} \times 3646500 \times \frac{8}{13} = 336600$

LCD TV produced by 'F' =  $\frac{18}{100} \times 3646500 \times \frac{4}{17} = 154440$

$$\text{Their ratio} = 336600 : 154440 = 85 : 39$$

39. LCD TV produced by 'E' =  $\frac{11}{100} \times 3646500 \times \frac{8}{13} = 246840$

$$\text{Total T.V's produced 'F'} = \frac{18}{100} \times 3646500 = 656370$$

$$\text{Required \%} = \frac{246840}{656370} \times 100 = 37.6\%$$

40. LED T.V

$$A = \frac{15}{100} \times 3646500 \times \frac{8}{13} = 336600$$

$$B = \frac{13}{100} \times 3646500 \times \frac{6}{17} = 154440$$

$$C = \frac{21}{100} \times 3646500 \times \frac{11}{15} = 561561$$

$$D = \frac{22}{100} \times 3646500 \times \frac{8}{11} = 583440$$

$$E = \frac{11}{100} \times 3646500 \times \frac{5}{13} = 154275$$

$$F = \frac{18}{100} \times 3646500 \times \frac{13}{17} = 501930$$

$$\text{Average} = 384186$$

$$41 - 45 : \text{Spanish} = \frac{51.6}{100} \times 14000 = 7224$$

$$\text{German} = \frac{50.4}{100} \times 14000 = 7056$$

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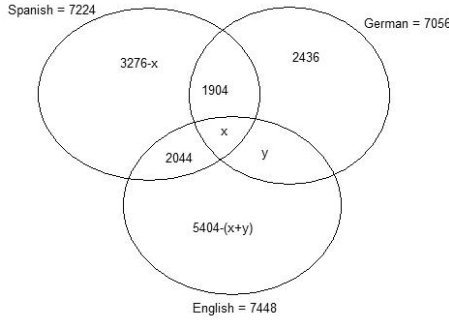


English =  $\frac{53.2}{100} \times 14000 = 7448$

Spanish and English =  $\frac{14.6}{100} \times 14000 = 2044$

Spanish and German = 1904

Only English =  $\frac{19.2}{100} \times 14000 = 2668$



$3276 - x + 1904 + 2044 + 2436 + 5404 - (x + y) + x + y = 14000$   
 $x = 15064 - 14000$   
 $x = 1064$   
 $y = 1652$

41. (2)  
43. (4)

42. (3)  
44. (1)

46.  $\frac{5106}{37} + \frac{9 \times 5681}{23} = 3x$

$138 + 2223 = 3x \Rightarrow x = 787$

47.  $\sqrt[3]{12167} + \sqrt[3]{4096} = \sqrt{x}$

$23 + 16 = \sqrt{x}$

$39 = \sqrt{x}$

$x = 1521$

48.  $\frac{17.76}{0.37} + \frac{24.32}{0.38} = x$

$x = 48 + 64$

$x = 112$

49.  $\frac{0.32}{100} \times 1684 + \frac{0.48}{100} \times 2145$

$5.3888 + 10.2960$

$\Rightarrow 15.688$

50.  $716.4 + 59.7 \times 7.85 = 716.4 + 468.645 = 1185.045$

51.  $3 \times 2 + 2 = 8$

$8 \times 4 + 2 = 34$

$34 \times 6 + 2 = 206$

$206 \times 8 + 2 = 1650$

$1650 \times 10 + 2 = 16502$

52.  $4 + 6 = 10$

$10 + 8 = 18$

$18 + 10 = 28$

$28 + 12 = 40$

$40 + 14 = 54$

53.  $2^3 - 1 = 7$

$4^3 - 3 = 61$

$6^3 - 5 = 211$

$8^3 - 7 = 505$

$10^3 - 9 = 991$

$12^3 - 11 = 1717$

54.  $(842 + 8) \div 2 = 425$

$(425 + 16) \div 3 = 147$

$(147 + 24) \div 4 = 42.75$

55.  $(42.75 + 32) \div 5 = 14.95$

$8 \times 1.1 = 8.8$

$16 \times 2.2 = 35.2$

$24 \times 3.2 = 76.8$

$32 \times 4.2 = 134.4$

$40 \times 5.2 = 208$

$48 \times 6.2 = 297.6$

56.  $20x^2 - 59x + 42 = 0$

$20x^2 - 24x - 35x + 42 = 0$

$4x(5x - 6) - 7(5x - 6) = 0$

$(5x - 6)(4x - 7) = 0$

$x = \frac{6}{5}, x = \frac{7}{4}$

$\therefore$  Relationship cannot be established

57.  $8x^2 + 3x - 5 = 0$

$8x^2 + 8x - 5x - 5 = 0$

$8x(x + 1) - 5(x + 1) = 0$

$(x + 1)(8x - 5) = 0$

$x = -1, x = \frac{5}{8}$

$\therefore x > y$

58.  $2x^2 + x - 1 = 0$

$2x^2 + 2x - x - 1 = 0$

$2x(x + 1) - 1(x + 1) = 0$

$(x + 1)(2x - 1) = 0$

$x = -1, x = \frac{1}{2}$

$\therefore x < y$

59.  $x = \sqrt[3]{4913}$

$x = 17$

$\therefore x \geq y$

60.  $7x + 4y + 5 = 0$  ..... (1),

Solve equation (1) and (2)

$x = -3, y = 16$

$\therefore x < y$

61. Average run scored by 'E'

$= \frac{92 + 105 + 21 + 27 + 47}{5} = \frac{292}{5} = 58.4$

62. Total players Score in  $M_2 = 47 + 67 + 54 + 33 + 105 + 26 = 327$

Total players Score in  $M_3 = 81 + 61 + 13 + 41 + 21 + 08 = 225$

Their difference =  $327 - 225 = 102$

63. Required % =  $\frac{92}{325} \times 100 = 28.3\%$

64. Required % =  $\frac{63 - 40}{40} \times 100 = 57.5\%$

65. Required % =  $\frac{47 - 27}{27} \times 100 = 74.07\% \approx 74\%$

78 - 79. P - Physics - B

Q - Maths - C

R - English - E

S - Biology - A

T - Chemistry - D

78. (2)

80. (2)

79. (4)

