BANK PO PHASE-I MOCK TEST-31 (SOLUTION)

REASONING

1. (4) Given number: 7 5 3 6 8 2 1 9
Ascending order: 1 2 **3** 5 6 7 8 **9**

2. (1)

3. (5) As,

E	C	O	N	O	M	I	C	S
↓	↓	↓	↓	↓	↓	↓	↓	↓
Z	Y	L	L	N	K	F	Y	N
–5	–4	–3	–2	–1	–2	–3	–4	–5

Similarly,

I	N	S	T	I	T	U	T	E
↓	↓	↓	↓	↓	↓	↓	↓	↓
D	J	P	R	H	R	R	P	Z
–5	–4	–3	–2	–1	–2	–3	–4	–5

4. (3) FOREIGN

1. E G
2. R N

Only these two values are possible in the word FOREIGN.

5. (4) C _ _ _ _ _ _ _

Either E will be right or left side of C.

C _ _ _ _ _ W _

or

W _ _ _ _ _ C _ _ _ _ _ _ _

So in that condition we cannot decide the position of W.

Solutions (6-10) : In the given set of input/output question the logic is :
First, out of the three word-number combirat the smallest number along with the word following it is shifted to the left most side, then the largest number along with the word following it is shifted alternatively to left side and so on. After all the numbers are shifted the remaining words are arranged alphabetically.

Input : "Rahul Needs 31 English 18 Hindi And 24 Science Books".

Step I: 18 Hindi Rahul needs 31 English And 24 Science books

Step II: 18 Hindi 31 English Rahul Needs And 24 Science Books

Step III: 18 Hindi 31 English 24 Science Rahul Needs And Books

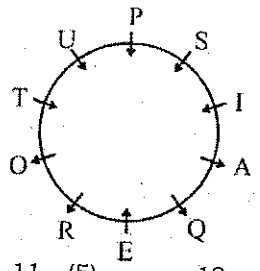
Step IV: 18 Hindi 31 English 24 Science And Rahul Needs Books

Step V: 18 Hindi 31 English 24 Science And Books Rahul Needs

Step VI: 18 Hindi 31 English 24 Science And Books Needs Rahul

6. (3) 7. (4) 8. (1)
9. (3)

Solutions (10-16) :



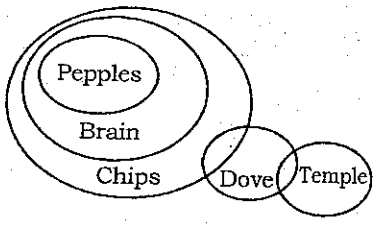
10. (2) 11. (5) 12. (1)
13. (1) 14. (3) 15. (2)
16. (3)

Solutions (17-21) :

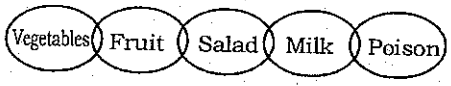
17. (4) 18. (4) 19. (1)
20. (5)
21. (5) By both statements we can say that Rajesh is second to the right of Umesh.
22. (1) 23. (4) 24. (4)
25. (3) 26. (1)

(27–31) :

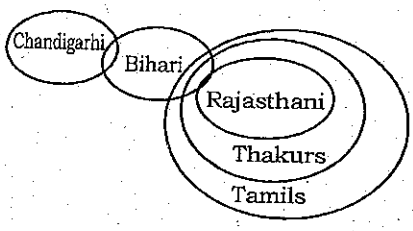
27. (4)



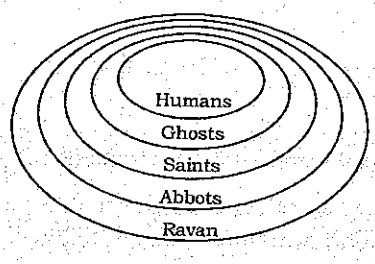
28. (1)



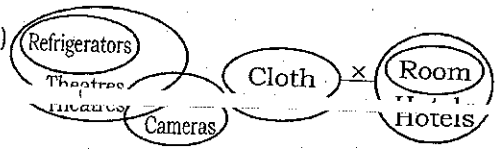
29. (2)



30. (3)



31. (3)



32. (1) 33. (5)
34. (1) 35. (4)

Maths

36. (3) The series is :
$13 \times 3 - 4 = 35$
$35 \times 3 - 4 = \boxed{101}$
$101 \times 3 - 4 = 299$
$299 \times 3 - 4 = 893$
$893 \times 3 - 4 = 2675$

37. (4)

38. (5) The series is:
$9 + 17 = 26$
$17 + 26 = 43$
$26 + 43 = 69$
$43 + 69 = \boxed{112}$
$69 + 112 = 181$
$112 + 181 = 293$
$181 + 293 = 474$
$293 + 474 = 767$

39. (4) The series is:
$8 \times 3 + (2 \times 3) = 30$
$30 \times 4 + (3 \times 4) = 132$
$132 \times 5 + (4 \times 5) = \boxed{680}$
$680 \times 6 + (5 \times 6) = 4110$
$4110 \times 7 + (6 \times 7) = 28812$
$28812 \times 8 + (7 \times 8) = 230552$

40. (1) The series is combination of two series:

$13 + 7 = 20$	$16 + 6 = 22$
$20 + 14 = 34$	$22 + 12 = \boxed{34}$
$34 + 21 = 55$	$34 + 18 = 52$
$55 + 28 = 83$	$52 + 24 = 76$

41. (5) Two balls can be drawn out of 17 (8 + 9)

balls in ${}^{17}C_2$ ways $= \dfrac{17!}{2!5!} = 17 \times 8 = 136$

One white can be drawn out from 8 balls in ${}^{8}C_1 = 8$ ways
Similarly, 1 black ball can be drawn in ${}^{9}C_1 = 9$ ways

$P(E) = \dfrac{9 \times 8}{136} = \dfrac{72}{136} = \dfrac{9}{17}$

42. (3) There are total 7 letters where 'N' comes twice.

Total number of arrangement $= \dfrac{7!}{2!} = 2520$

One word is 'NISHANT' itself.
Total rearrangement = 2520 – 1 = 2519

43. (2) Let amount x be lent on 8% per annum.

$\therefore \dfrac{x \times 8 \times 5}{100} + \dfrac{(8000 - x) \times 4 \times 5}{100} = 2200$

$\Rightarrow 40x + 20(8000 - x) = 220000$
$\Rightarrow 20x + 160000 = 220000$

$\therefore x = \dfrac{220000 - 160000}{20} = 3000$

44. (4) Sum $= 5.60 \times \left(\dfrac{100}{8}\right)^2 =$ Rs 875

45. (3) Let present age of A be x and B y.
$x + y = 85$ ...(i)
$(x - 20) = 3.5(y - 20)$
$2x - 40 = 7y - 140$
$2x - 7y = -100$ ...(ii)
From equations (i) and (ii), $x = 55$, $y = 30$

46. (3) Share of C $= 1755 \times \left(1 - \dfrac{8}{13}\right)$

$= 1755 \times \dfrac{5}{13} = 675$

47. (4) Let the speed of train be x.

$\therefore$ Speed of bus $= \dfrac{x}{5}$ and speed of car $= \dfrac{x}{3}$

$\therefore \dfrac{125}{\left(\frac{x}{5}\right)} + \dfrac{350}{x} + \dfrac{75}{\left(\frac{x}{3}\right)} = 16$

$\therefore \dfrac{625}{x} + \dfrac{350}{x} + \dfrac{225}{x} = 16$

$\therefore x = \dfrac{625 + 350 + 225}{16} = \dfrac{1200}{16} = 75$

48. (1) Let speed of trains be x m/sec and y m/sec.

$x - y = \dfrac{100 + 60}{16} = 10$ ...(i)

$x + y = \dfrac{100 + 60}{4} = 40$ ...(i)

From equations (i) and (ii), $x = 25$ m/sec, $y = 15$

49. (2) Speed downstream $= \dfrac{28}{7} = 4$ kmph

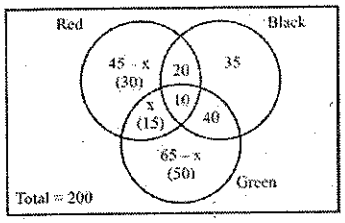
Speed upstream $= \dfrac{28}{14} = 2$ kmph

Speed in still water $= \dfrac{1}{2}(2+4) = 3$ kmph

50. (3) Resultant profit = $16 + 25 + \left(\frac{16\times25}{100}\right)$

= 45%

(51-55) :



$45 - x + 20 + 35 + 10 + x + 40 + 65 - x = 200$

$215 - x = 200$

$x - 215 - 200 = 15$

51. (1) 52. (5) 53. (5)

54. (4) 55. (2)

Solutions (56-60) :

56. (2) Saving of A = $\frac{60°}{360°} \times 450000 = 75000$

Saving of B = $\frac{30°}{360°} \times 540000 = 45000$

Total = 75000 + 45000 = 120000

57. (3) The amount spent on clothes by

$A = \frac{40°}{360°} \times 450000 = 50000$

The amount spent on clothes by

$B = \frac{50°}{360°} \times 540000 = 75000$

$\therefore$ Ratio = $\frac{50000}{75000} = \frac{2}{3} = 2 : 3$

58. (5) The amount spent on food by

$B = \frac{120°}{360°} \times 540000 = 180000$

Education of A = $\frac{80°}{360°} \times 45000 = 100000$

$\therefore$ % = $\frac{180000}{100000} \times 100 = 180\%$

59. (3) The amount spent on house rent of A = $\frac{70°}{360°} \times 450000 = 87500$

The amount spent on rent of B = $\frac{70°}{360°} \times 540000 = 112500$

$\therefore$ Average = $\frac{112500 + 87500}{2} = \frac{200000}{2}$

= 100000 = 1 lakh

60. (4) The amount spent on education by

$B = \frac{85°}{360°} \times 540000 = 127500$

The amount spent on education by

$A = \frac{85°}{360°} \times 450000 = 100000$

$\therefore$ % = $\frac{127500 - 10000}{100000} \times 100$

= $\frac{27500}{100000} \times 100 = 27.5$

Solutions (61-65) :

Year	Food	Education
2001	**Rs 2400**	**Rs 1600**
2002	**Rs 2420**	**Rs 1980**
2003	**Rs 2500**	**Rs 2500**
2004	**Rs 36,40**	**Rs 1960**
2005	**Rs 2700**	**Rs 3300**

61. (4) 62. (1) 63. (4)

64. (5) 65. (3)

Solutions (66-70) :

66. (5) I. $35x^2 - 99x + 70 = 0$

$(7x - 10)(5x - 7) = 0$

$x = \frac{10}{7}, \frac{7}{5}$

II. $y^2 - \sqrt{2y} + \sqrt{6} = \sqrt{3y}$

$(y - \sqrt{2})(y - \sqrt{3}) = 0$

$y = \sqrt{2} = 1.414$

$y = \sqrt{3} = 1.732$

relation can't be established

67. (5) I. $28x - 41\sqrt{x} + 15 = 0$

$28x - 21\sqrt{x} - 20\sqrt{x} + 15 = 0$

$(4\sqrt{x} - 3)(7\sqrt{x} - 5) = 0$

$x = \frac{9}{16}, \frac{25}{49}$

II. $40y - 57\sqrt{y} + 20 = 0$

$(5\sqrt{y} - 4)(8\sqrt{y} - 5) = 0$

$y = \frac{16}{25}, \frac{25}{64}$

68. (5) I. $x^2 - 7\sqrt{2}x + 24 = 0$

$(x - 3\sqrt{2})(x - 4\sqrt{2}) = 0$

$x = 3\sqrt{2},\ 4\sqrt{2}$

II. $y^2 - 5\sqrt{5}y + 18 = 0$

$(y - 3\sqrt{3})(y - 2\sqrt{3}) = 0$

$y = 3\sqrt{3},\ 2\sqrt{3}$

69. (3) $x - 20\sqrt{x} + 99 = 0$

$(\sqrt{x} - 11)(\sqrt{x} - 9)$

$x = 121, 81$

$y - 25\sqrt{y} + 156 = 0$

$(\sqrt{y} - 12)(\sqrt{y} - 13) = 0$

$y = 144, 169$

70. (5) $x^2 - 15x + 44 = 0$

$(x - 4)(x - 11) = 0$

$x = 4, 11$

$y^2 - 8\sqrt{2y} + 30 = 0$

$(y - 3\sqrt{2})(y - 5\sqrt{2})$

$y = 3\sqrt{2},\ 5\sqrt{2}$

ENGLISH LANGUAGE

71. (2)	72. (4)	73. (1)
74. (3)	75. (4)	76. (2)
77. (5)	78. (4)	79. (3)
80. (1)	81. (2)	82. (3)
83. (5)	84. (3)	85. (1)
86. (4)	87. (4)	88. (3)
89. (5)	90. (5)	91. (2)
92. (5)	93. (4)	94. (1)
95. (2)	96. (1)	97. (1)
98. (2)	99. (1)	100. (2)