

**RPF MOCK TEST – 5 (SOLUTION)**

51. (B) Let price of mixed tea = ₹x/kg  
ATQ,

$$\begin{array}{ccc} 14 & & 21 \\ & \diagdown & / \\ & x & \\ & / & \diagdown \\ (21-x) & & (x-14) \end{array}$$

Now,  $\frac{21-x}{x-14} = \frac{3}{4}$   
 $\Rightarrow 84 - 4x = 3x - 42$   
 $\Rightarrow 7x = 126$   
 $\Rightarrow x = 18$

52. (A) Let the amount of water to be added into mixture = x  
Now, ratio of milk and water initially = 9 : 36 = 1 : 4

ATQ,  
 $\frac{9 - \frac{x \times 1}{5} + x}{36 - \frac{x \times 4}{5}} = \frac{3}{7}$

$\Rightarrow \frac{45 + 4x}{180 - 4x} = \frac{3}{7}$   
 $\Rightarrow 315 + 28x = 540 - 12x$   
 $\Rightarrow x = 5.625$

53. (A) Let the side of square field = a unit  
Distance travelled across diagonal =  $\sqrt{2}$  a unit  
Distance across sides = 2a unit  
∴ Required percentage

$$\begin{aligned} &= \frac{2a - \sqrt{2}a}{2a} \times 100 \\ &= \frac{a(2 - \sqrt{2})}{2a} \times 100 \\ &= \frac{0.59}{2} \times 100 \\ &= 29.5 \end{aligned}$$

54. (C) Let the side of square = a unit

Radius of incircle =  $\frac{a}{2}$  unit

and, radius of circumcircle =  $\frac{\sqrt{2}a}{2}$  unit

∴ Required ratio =  $\frac{a^2}{4} : \frac{2a^2}{4} = 1 : 2$

55. (D) Required difference =  $6 \times 4 = 24$  years  
56. (B) Let the average expenditure of all 12 = x  
ATQ,

$$\begin{aligned} 11 \times 40 + x + 22 &= 12 \times x \\ \Rightarrow 440 + x + 22 &= 12x \\ \Rightarrow x &= 42 \end{aligned}$$

∴ Total expenditure =  $12 \times 42 = ₹504$

57. (C) True discount

$$= \sqrt{\text{Present worth} \times \text{Banker's discount}}$$

∴ True discount =  $\sqrt{625 \times 16} = ₹100$

58. (D) Let required distance = x km  
ATQ,

$$\frac{x}{10+2} + \frac{x}{10.2} = 5$$

$$\Rightarrow \frac{2x+3x}{24} = 5$$

$\Rightarrow x = 24$

59. (A) ATQ,

Difference between CI and SI for 2 years =  $(927 - 900) = ₹27$

SI for one year =  $\frac{900}{2} = ₹450$

SI on ₹450 for one year = ₹27

∴ Rate =  $\frac{270 \times 100}{450} = 6\%$

∴ Required difference =  $\frac{927 \times 6}{100} = ₹55.62$

60. (C) Let amount = 100

First year = 80

Second year = 80 + 64

Third year = 80 + 64 + 64 + 51.2

∴ Required minimum number of half year =  $4 \times 2 = 8$

61. (D)  $\frac{0.6042}{0.06} = 10.07$

62. (B) ATQ,

$$\frac{(0.3 \times 0.3 + 0.02)}{(0.2 \times 0.2 + 0.03)} = \frac{0.11}{0.07} = \frac{11}{7}$$

63. (C) Let the age of person = x years

ATQ,

$$x = 4(x+4) - 4(x-4)$$

$$\Rightarrow x = 4x + 16 - 4x + 16$$

$$\Rightarrow x = 32$$

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64. (C) Let numbers are  $37a$  and  $37b$   
 ATQ,  
 $37a + 37b = 518$   
 $\Rightarrow a + b = 14$   
 $\therefore$  Required pairs = (1, 13) (3, 11) and (5, 9)
65. (A) LCM of 6, 9, 15 and 18 = 90  
 $\therefore$  Number =  $90k + 4$ , multiple of 7  
 Last value of  $k$  for  $90k + 4$  is divisible by 7.  
 $\therefore$  Required number =  $(90 \times 4) + 4$   
 $= 364$
66. (B) Let total profit =  $x$   
 Capital ratio of both =  $1350 : 950 = 27 :$   
 $19$  Share of first in  $30\% = \frac{3x}{10} \times \frac{27}{46}$   
 $19$  Share of second in  $30\% = \frac{3x}{10} \times \frac{19}{46}$   
 Now,  $\frac{81x}{460} + \frac{7x}{20} = \frac{57x}{460} + \frac{7x}{20} + 25$   
 $\Rightarrow 81x - 57x = 11500$   
 $\Rightarrow x = 479.17$
67. (B) Let total marks =  $x$   
 ATQ,  
 $\frac{x \times 27}{100} + 56 = \frac{x \times 42}{100} - 64$   
 $\Rightarrow \frac{15x}{100} = 120$   
 $\Rightarrow x = 800$
68. (D) Let total number of children =  $x$   
 ATQ,  
 $x \times \frac{x \times 25}{100} = 484$   
 $\Rightarrow \frac{x^2}{4} = 484$   
 $\Rightarrow x = 44$   
 $\therefore$  Required answer =  $\frac{44 \times 25}{100} = 11$
69. (B) Work done by A, B and C in 2 hours  
 $= \frac{2}{6} = \frac{1}{3}$   
 A and B can do the whole work =  $6 \times \frac{3}{2}$   
 $= 9$  hours  
 Now,  
 $A + B + C \text{ --- } 6 \begin{matrix} \nearrow 3 \\ \searrow 3 \end{matrix}$   
 $A + B \text{ --- } 9 \begin{matrix} \nearrow 2 \\ \searrow 2 \end{matrix}$   
 $C$  alone can fill the tank =  $\frac{18}{1} = 18$  hours

70. (B) Let 4 taps together work for  $x$  hours.  
 Time taken to fill half tank = 3 hours.  
 ATQ,  
 $1 \times 3 = x \times 4$   
 $\Rightarrow x = \frac{3}{4}$   
 $\therefore$  Total time =  $3 \frac{3}{4}$  hours  
 $= 3$  hours 45 min.
71. (D) Let the age of father be  $y$  years when he died.  
 A.T.Q.,  
 $8x + 96 - y = 8x$   
 $\Rightarrow y = 96$
72. (A) A.T.Q.,  
 Total cost price ₹23400  
 Total profit = ₹3960  
 Total profit on a cycles =  $(11500 - 9750 + 600)$   
 $= ₹2350$   
 Total selling price of remaining cycles  
 $= \frac{1950 \times 3 + 1619}{3}$   
 $= ₹2486.67$
73. (C) A.T.Q.,  
 $a + b + c = 14$   
 Now,  
 $(a + b + c)^2 = (14)^2$   
 $\Rightarrow a^2 + b^2 + c^2 + 2(ab + bc + ca) = 196$   
 $\Rightarrow ab + bc + ca = \frac{196 - 74}{2}$   
 $\Rightarrow ab + bc + ca = 61$
74. (B) Let the total score =  $x$   
 Highest score =  $\frac{4x}{13}$   
 Next highest score =  $\left(x - \frac{4x}{13}\right) \frac{4}{13}$   
 $= \frac{36x}{169}$   
 A.T.Q.,  
 $\frac{4}{13}x - \frac{36}{169} = 32$   
 $\Rightarrow \frac{52x - 36x}{169} = 32$   
 $\Rightarrow 16x = 32 \times 169$   
 $\Rightarrow x = 338$
75. (A) A : B  
 80 : 60  
 A : C  
 80 : 55  
 $\frac{B}{C} = \frac{B}{A} \times \frac{A}{C} = \frac{60}{80} \times \frac{80}{55} = 120 : 110$   
 $\therefore$  B can give C, 10 points in a game of 120.

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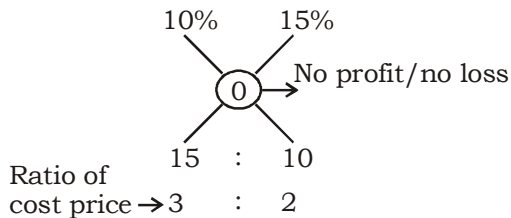
76. (A) Quantity of petrol taken from first vessel = 1 litre out of 2 litre  
Quantity of petrol taken from second vessel = 1.8 litre out of 3 litre  
Quantity of petrol taken out from third vessel = 0.8 litre out of 1 litre.  
Total petrol taken out from first, second and third vessels = 1 + 1.8 + 0.8 = 3.6 litres  
∴ Required ratio = 3.6 : (6-3.6)  
= 3.6 : 2.4  
= 3 : 2

77. (B) Initial 4 : 5 : 6  $\begin{matrix} \nearrow \times 2 \\ \searrow \times 3 \end{matrix}$  same  
New 6 : 5 : 4  
Now, 8 : 10 : 12  
18 : 15 : 12  
∴ Required ratio = 10 : 5 = 2 : 1

78. (A)  $= \frac{3 + \sqrt{6}}{5\sqrt{3} - 4\sqrt{3} - 4\sqrt{2} + 5\sqrt{2}} = \frac{3 + \sqrt{6}}{\sqrt{3} + \sqrt{2}}$   
 $= \frac{3 + \sqrt{6}(\sqrt{3} - \sqrt{2})}{(\sqrt{3} + \sqrt{2})(\sqrt{3} - \sqrt{2})}$   
 $= \frac{3\sqrt{3} + \sqrt{18} - 3\sqrt{2} - \sqrt{12}}{1} = \sqrt{3}$

79. (D) Gain in 4 years  
 $\left[ \left( 600 \times \frac{25}{4} \times \frac{4}{100} \right) \right] - \left( \frac{6000 \times 5 \times 2}{100} \right)$   
= 1500 - 600 = ₹900  
Gain per year =  $\frac{900}{4} = ₹225$

80. (A) By alligation rule,



ATQ,  
Let  $CP_1 = 300$  units,  $CP_2 = 200$  units  
 $SP_1 = \frac{300 \times 90}{100} = 270$  units  
 $SP_2 = \frac{200 \times 115}{100} = 230$  units  
Total SP = 270 + 230 = 500 units  
1 unit = ₹24  
100 units = ₹24 × 100 = ₹2400  
Difference in cost price = ₹2400

81. (A) Required percentage =  $\frac{100000 \times \frac{6}{100}}{80000 \times \frac{20}{100}} \times 100$   
 $= \frac{6000}{16000} \times 100 = 37.5\%$

82. (B) Required fraction  
 $= \frac{100000 \times \frac{10}{100} + 80000 \times \frac{15}{100}}{180000}$   
 $= \frac{22000}{180000} = \frac{11}{90}$

83. (C)  $100000 \times \frac{4}{100} = 80000 \times \frac{5}{100} = 4000$

84. (A)

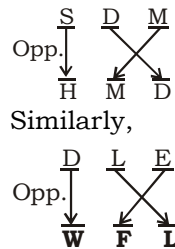
85. (B) Required percentage  
 $= \frac{16000 - 10000}{10000} \times 100$

$= \frac{6}{10} \times 100 = 60\%$

86. (C) As, Convection is the mode of transference of heat by water. Similarly, **Radiation** is the mode of transference of heat by the space.

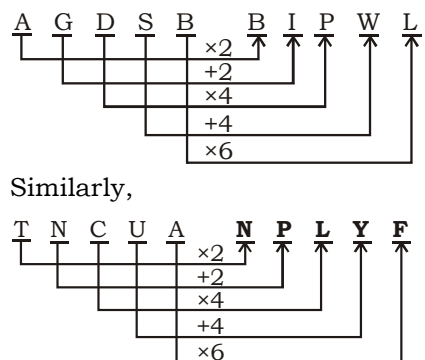
87. (B) As,  
 $3 + 4 \Rightarrow 7 \times 3 = 21$   
Similarly,  
 $7 + 2 \Rightarrow 9 \times 7 = 63$

88. (D) As,



89. (A) As,  
 $612 : 459 = 4x : 3x$   
Similarly,  
 $516 : 387 = 4x : 3x$

90. (C) As,



Similarly,

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91. (C) Except **(C)**, in other sets the sum of digits of number is 16, 18 and 20 respectively.

92. (C) Except **Eagle**, all other are flightless birds.

93. (D) Except **Girnar**, all others are famous battlefield.

94. (A) Except **109**, all others are multiple of 9.

95. (B)

B	I	R	G	O	X
+7	+9		+8	+9	
R	Y	H	W	D	M
+7	+9		+7	+9	

96. (C)  $13 \times 6 = 78$

$$18 \div 6 = 3$$

$$17 \times 9 = 151$$

$$27 \div 9 = 3$$

$$16 \times 8 = 128$$

$$32 \div 8 = \mathbf{4}$$

97. (A)  $58 - 38 \Rightarrow 20 \times 3 = 60$

$$7 - 4 \Rightarrow 3 \times 3 = 9$$

$$27 - 14 \Rightarrow 8 \times 3 = 24$$

$$16 - 7 \Rightarrow 9 \times 3 = \mathbf{27}$$

98. (C)

99. (C)

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    Dinesh --- Brother ---> Amit
      |
      | son
      |
    Yashpal --- Father ---> Vimal
      |
      | Grandson
      |
      Vimal
  
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100. (A) When a clock strikes 7, then intervals = 6 and, when a clock 10, then intervals = 9

$$\text{Required time} = \frac{7}{6} \times 9$$

$$= \mathbf{10 \frac{1}{2} \text{ sec.}}$$

101. (C) Take 'I' and II

$$\begin{matrix} 6 & 4 & 2 \\ 6 & 1 & 3 \end{matrix}$$

$$\therefore \mathbf{1 \leftrightarrow 4}$$

102. (D)

103. (B)

104. (C) -1, 6, 7, 18, 23

↓	↓	↓	↓	↓
$1^2-2$	$2^2+2$	$3^2-2$	$4^2+2$	$5^2-2$

105. (B)  $48 = 8 \times 6$

$$\mathbf{32} = 4 \times 8$$

$$6 = 3 \times 2$$

106. (B)

Z	L	W	J	T	H	Q	F
-3		-3		-3		-3	
	-2		-2		-2		

107. (A) Let the total number of shots =  $x$

$$\text{Then, shots fired by A} = \frac{5}{8}x$$

$$\text{And, shots fired by B} = \frac{3}{8}x$$

$$\text{Killing shots by A} = \frac{1}{3} \times \frac{5}{8}x = \frac{5}{24}x$$

$$\text{Shots missing B} = \frac{1}{2} \times \frac{3x}{8} = \frac{3x}{16}$$

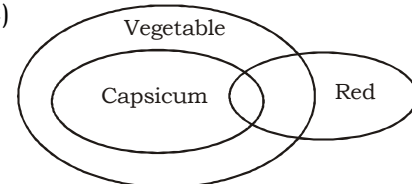
A.T.Q,

$$\frac{3x}{16} = 27$$

$$\Rightarrow x = 144$$

$$\therefore \text{Birds killed by A} = \frac{5}{24} \times 144 = \mathbf{30}$$

108. (C)



109. (A) **bababb/bababb**

110. (D)

111. (A) As,

$$4+3+5 = [4 \times 5] [(4+3)5+5] [4 \times 3 \times 5]$$

20            40            60

and,

$$8+4+3 = [4 \times 3] [(8+4)3+3] [8 \times 4 \times 3]$$

24            39            96

Similarly,

$$5+4+5 = [5 \times 5] [(5+4)5+5] [5 \times 4 \times 5]$$

**25            50            100**

112. (A)  $(4 - 16 \div 21) \times 17 + 6$

After changing the signs,

$$(4 \times 16 + 21) \div 17 - 6$$

$$= (64 + 21) \div 17 - 6$$

$$= 5 - 6 = \mathbf{-1}$$

113. (D)  $4 \div 8 - 2 = 6$

On Interchanging the signs and numbers according to question,

$$8 - 4 \div 2 = 6$$

$$\Rightarrow 8 - 2 = 6$$

$$\Rightarrow \mathbf{6 = 6}$$

114. (D)

115. (B)

116. (A) Required order-

C, M, E, C, M, P, E, P, C

117. (A)

118. (B)

119. (A) Total number of triangles = **21**

120. (C)

B	A	N	D
↓	↓	↓	↓
00,	55,	03,	59,

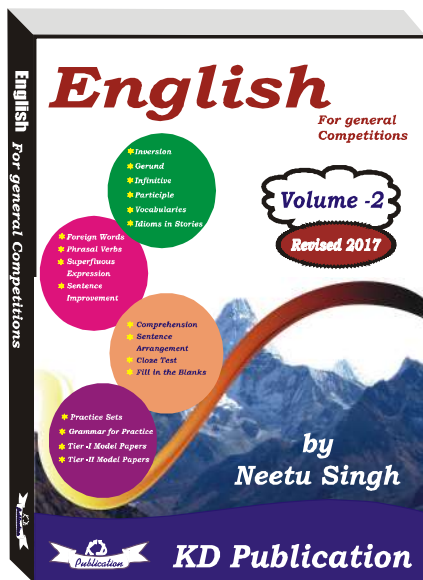
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**Answer key**

1. (A)	16. (C)	31. (A)	46. (B)	61. (D)	76. (A)	91. (C)	106.(B)
2. (C)	17. (B)	32. (B)	47. (D)	62. (B)	77. (B)	92. (C)	107.(A)
3. (D)	18. (B)	33. (A)	48. (B)	63. (C)	78. (A)	93. (D)	108.(C)
4. (B)	19. (B)	34. (C)	49. (C)	64. (C)	79. (D)	94. (A)	109.(A)
5. (A)	20. (B)	35. (B)	50. (A)	65. (A)	80. (A)	95. (B)	110.(D)
6. (A)	21. (C)	36. (B)	51. (B)	66. (B)	81. (A)	96. (C)	111.(A)
7. (D)	22. (C)	37. (B)	52. (A)	67. (B)	82. (B)	97. (A)	112.(A)
8. (A)	23. (C)	38. (A)	53. (A)	68. (D)	83. (C)	98. (C)	113.(D)
9. (C)	24. (B)	39. (D)	54. (C)	69. (B)	84. (A)	99. (C)	114.(D)
10. (C)	25. (D)	40. (B)	55. (D)	70. (B)	85. (B)	100.(A)	115.(B)
11. (A)	26. (B)	41. (C)	56. (B)	71. (D)	86. (C)	101.(C)	116.(A)
12. (B)	27. (A)	42. (D)	57. (C)	72. (A)	87. (B)	102.(D)	117.(A)
13. (A)	28. (B)	43. (A)	58. (D)	73. (C)	88. (D)	103.(B)	118.(B)
14. (C)	29. (B)	44. (C)	59. (A)	74. (B)	89. (A)	104.(C)	119.(A)
15. (B)	30. (A)	45. (B)	60. (C)	75. (A)	90. (C)	105.(B)	120.(C)

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**CHAPTERS**

- ★ Foreign Words
- ★ Phrasal Verbs
- ★ Superfluous
- ★ Expression
- ★ Sentence Improvement

**Note:- If your opinion differs regarding any answer, please message the mock test and question number to 8860330003**

**Note:- Whatsapp with Mock Test No. and Question No. at 7053606571 for any of the doubts, also share your suggestions and experience of Sunday Mock**

**Note:- If you face any problem regarding result or marks scored, please contact 9313111777**

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