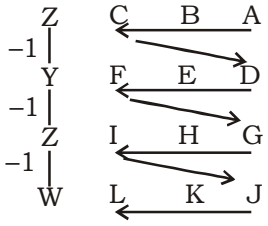
RRB MOCK TEST-5 (Solution)

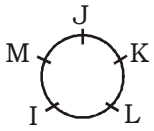
1. (C) $a\boxed{b}\,cb\boxed{c}$ / $\boxed{a}\,bc\boxed{b}\,c$/ $abcb\boxed{c}$

2. (B) Mountain has a height greater than that of a hill. Similarly, Ocean is a larger water body than that of a sea.

3. (A) A → Z
B → Y
C → X
Pairs of Opposite Letters
Therefore, D E F
↓ ↓ ↓
W V U

4. (B) Cinema is a audio-visual means of entertainment. All others are printed materials.

5. (D)


6. (D)


Just right of K is J.

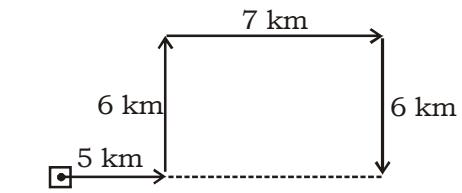
7. (D)

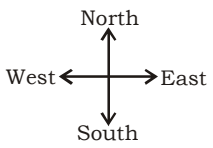
8. (A)

I	2	3	5	6	7	8	9	10	11	
H	O	S	I	T	A	L	I	T	Y	

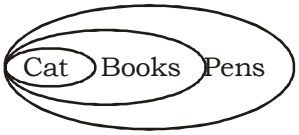
Specified letters ⇒ H, P, T, A
Meaningful word ⇒ P A T H

9. (A) Here rain is called swimming.

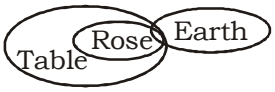
10. (C)




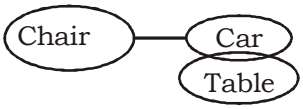
Required distance
= (5 + 7) km = 12 km

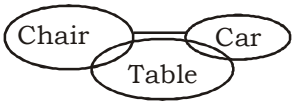
11. (D)


I. True
II. True

12. (A)


I. True
II. False

13. (C)


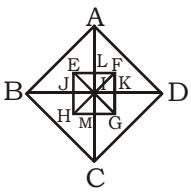
or


I. Doubtful
II. Doubtful

14. (B) In first diagram,
$2^2 + 3^2 + 4^2 + 5^2 = 54$
In second diagram,
$13^2 + 3^2 + 8^2 + 11^2 = 363$
Similarly,
In second diagram,
$12^2 + 7^2 + 9^2 + 15^2 = 499$

15. (B)

16. (C) The hands of a clock are at right angles twice in every hour but in 12 hours they are at right angles only 22 times. It is so because there are two positions common in every 12 hours, i.e., 30' clock and 90' clock.

17. (A)


Possible triangles are :
ΔABI, ΔAID, ΔBAD
ΔBCI, ΔCID, ΔBCD
ΔABC, ΔACD, ΔEGI, ΔIEL, ΔLIF
ΔFIK, ΔKIG, ΔIGM, ΔIHM, ΔIJH
ΔEIF, ΔEIH, ΔHIG, ΔFIG,
ΔEFG, ΔFHG, ΔEGH, ΔEHF

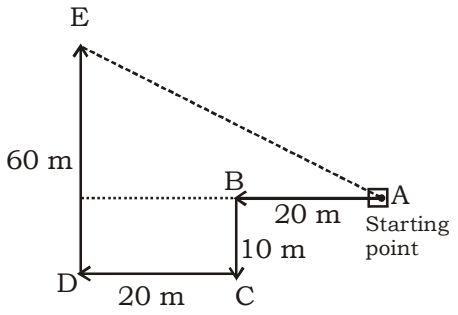
18. (B) Saturday + 3 = Tuesday
The day before the day before yesterday will be Tuesday.
So, today is Tuesday + 3 = Friday.

19. (C) $5 \times 15 + 7 - 20 + 4 = 77$
$\Rightarrow 5 \times 15 + 7 - 20 + 4 = 77$
$\Rightarrow 75 + 7 - 5 = 77$

20. (D) Son of A is the brother of C and D. Therefore, B is the uncle of C.
B may be son or daughter of A.

21. (B) First Row
F + I $\Rightarrow$ O
$\downarrow$ $\downarrow$
6 + 9 $\Rightarrow$ 15
Second Row
A + J $\Rightarrow$ K
$\downarrow$ $\downarrow$
1 + 10 $\Rightarrow$ 11
Third Row
E + M $\Rightarrow$ R
$\downarrow$ $\downarrow$
5 + 13 $\Rightarrow$ 18

22. (B)



23. (B) The year 2007 is an ordinary year. So, it has 1 odd day.
1st day of the year 2007 was Monday.
1st day of the year 2008 will be 1 day beyond Monday.
Hence, it will be Tuesday.

24. (B) The required region should be common to only square and rectangle. Such region is marked '5'.

25. (A) In the given word, there are only one E and only one S. Hence, word RESPONSE cannot be formed. The word has no T. Hence, words REPENT and CORRECT cannot be formed.

C O R R E S P O NDI N G $\Rightarrow$ DISCERN

26. (C) Sum of first n natural numbers

$$= \frac{n(n+1)}{2}$$

Here, $n = 15$

$$\therefore \text{ Required sum } = \frac{15 \times 16}{2} = 120$$

27. (A) HCF × LCM = product of numbers
$\therefore xy = 3 \times 105 = 315$
$x + y = 36$

$$\therefore \frac{x+y}{xy} = \frac{1}{y} + \frac{1}{x} = \frac{36}{315} = \frac{4}{35}$$

28. (A) $\frac{1}{-2} = -0.5$;

$$\frac{1}{(-2)^2} = \frac{1}{4} = 0.25$$

$$-\frac{1}{2} < \frac{1}{(-2)^2}$$

29. (B) Let the amount of milk and water are $5x$ and $4x$ respectively.

By question, $\frac{5x}{x+5} = \frac{5}{2}$

$\Rightarrow 2x = x + 5 \therefore x = 5$
$\therefore$ amount of milk = $5x = 5 \times 5$
= 25 L

30. (A) Interest = 1200 - 800 = 400

$$\therefore \text{ S.I} = \frac{P \times R \times T}{100}$$

$$\Rightarrow 400 = \frac{800 \times R \times 10}{100}$$

$\therefore$ R = 5%

31. (A) Required value

$$= 5{,}40{,}000 \left(1 - \frac{50}{3 \times 100}\right)^3$$

$$= 5{,}40{,}000 \left(\frac{5}{6}\right)^3$$

= ₹ 3,12,500

32. (D) Expression

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{8\sqrt{7 + 4\sqrt{3}}}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{8\sqrt{4 + 3 + 2 \times 2\sqrt{3}}}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{8\sqrt{(2+\sqrt{3})^2}}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{8(2+\sqrt{3})}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{16 + 8\sqrt{3}}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + \sqrt{12 + 4 + 2 \times 2 \times 2\sqrt{3}}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{2 + (2 + 2\sqrt{3})}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{4 + 2\sqrt{3}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{3 + 1 + 2 \times \sqrt{3}}}$$

$$= \sqrt{-\sqrt{3} + \sqrt{3} + 1} = 1$$

33. (C) Total distance travelled
= 50 × 2.5 + 70 × 1.5
= (125 + 105) km = 230 km

34. (D) Required increase

$$= \left(30 + 30 + \frac{30 \times 30}{100}\right)\%$$

= 69%

35. (B) Part of the tank filled by both pipes in 1 minute.

$$= \frac{1}{20} + \frac{1}{30} = \frac{3+2}{60} = \frac{1}{12}$$

Hence, the tank will be filled in 12 minutes.

36. (B)

37. (D) Ratio of sides = $\frac{1}{2} : \frac{1}{3} : \frac{1}{4}$

$$= \frac{1}{2} \times 12 : \frac{1}{3} \times 12 : \frac{1}{4} \times 12$$

= 6 : 4 : 3

$\therefore$ The smallest side

$$= \frac{3}{(6+4+3)} \times 52$$

$$= \frac{3}{13} \times 52 = 12 \text{ cm}$$

38. (C) From the given alternatives,
26 + 1 = 27; 35 + 1 = 36

$$\therefore \frac{27}{36} = \frac{3}{4}$$

Again, 26 – 5 = 21; 35 – 5 = 30

$$\therefore \frac{21}{30} = \frac{7}{10}$$

39. (C) Let the numbers be a and b.
Then, $a + b = 55$ and $ab = 5 \times 120 = 600$.

The required sum = $\frac{1}{a} + \frac{1}{b} = \frac{a+b}{ab}$

$$= \frac{55}{600} = \frac{11}{120}$$

40. (B) S.P = $\frac{60}{85} \times 100 \times \frac{102}{100}$ = ₹ 72

41. (D) Let listed Price = 100
Total discounted price after successive discounts of 25% , 30% & 40%

$$= 100 \times \frac{100-25}{100} \times \frac{100-30}{100} \times \frac{100-40}{100}$$

$$= 100 \times \frac{75}{100} \times \frac{70}{100} \times \frac{60}{100}$$

$$= \frac{3150}{100} = 31.50$$

Single equivalent discount 100 – 31.50
= 68.50%

42. (D) The pattern is :
5 × 2 – 2 = 10 – 2 = 8
8 × 2 – 2 = 16 – 2 = 14
14 × 2 – 2 = 28 – 2 = 26
26 × 2 – 2 = 52 – 2 = 50
50 × 2 – 2 = 100 – 2 = $\boxed{98}$

43. (A) $3^2 + 4^2 = 5^2$
It is a right angle triangle.

44. (A) $\frac{m}{n} = \frac{12}{10} = \frac{6}{5}$

$$\Rightarrow \frac{m^2}{n^2} = \left(\frac{6}{5}\right)^2 = \frac{36}{25}$$

$$\therefore \frac{m^2+n^2}{m^2-n^2} = \frac{\frac{m^2}{n^2}+1}{\frac{m^2}{n^2}-1}$$

(On dividing numerator and denominator by n^2)

$$= \frac{\frac{36}{25}+1}{\frac{36}{25}-1} = \frac{36+25}{36-25} = \frac{61}{11} = 5\frac{6}{11}$$

45. (B) Here, first divisor (56) is a multiple of second divisor (8).
$\therefore$ Required remainder = Remainder obtained on dividing 29 by 8 = 5

46. (B) Let speed of boat in still water = x km/h. and speed of current = y km/h.
By question,

$$\frac{24km}{(x+y)km/h} = 10$$

$$\therefore x + y = \frac{24}{10} = 2.4 \quad ...(1)$$

$$\frac{24km}{(x-y)km/h} = 12h$$

$$x - y = \frac{24}{12} = 2 \quad ...(2)$$

Adding from equation (1) and (2)
$x + y = 2.4$
$\underline{x - y = 2}$
$2x = 4.4$
$\Rightarrow x = 2.2$ km/h

47. (B) $\because$ 16 Men cut in 30 days
$\therefore$ 1 men cut in 30×16 days

$\therefore$ 20 men cut in $\frac{30 \times 16}{20}$

= 24 days

48. (D) Required number of employees who participated in both Engineering and Industries professions = $26800 \times \frac{(9+13)}{100}$

= $268 \times 22 = 5896$

49. (A) Total number of employees in Management profession = $26800 \times \frac{17}{100}$

= 4556

Number of female employees in Management profession = $4556 \times \frac{3}{4}$

= 3417

$\therefore$ Required number of male employees in Management profession = 4556 – 3417
= 1139

50. (C) Number of employees in Teaching profession = $26800 \times \frac{15}{100} = 4020$

Number of employees in Medical profession

= $26800 \times \frac{27}{100} = 7236$

Total number of employees = 4020 + 7336 =11256

Number of employees in Management profession = $26800 \times \frac{17}{100} = 4556$

$\therefore$ Reqd difference = 11256 – 4556 = 6700

RRB MOCK TEST-5 (ANSWER KEY)

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