

# RAILWAY MOCK TEST – 3(SOLUTION)

1. (A)

As, Internal security is an issue of Ministry of Home Affairs. Similarly, **Company** is an issue of Ministry of corporate Affairs.

2. (A)

As, the unit of Force is Newton. Similarly, the unit of Sound is **Decibel**.

3. (B)

EVENT is written in alphabetical order i.e. EENTV Similarly, REASON is written in alphabetic order i.e **AENORS**

4. (C)

As,  $(7 + 3)^2 = 100$

Similarly,

$$(1 + 8)^2 = 81$$

5. (D)

Except **Son**, all are tributaries of Yamuna.

6. (C)

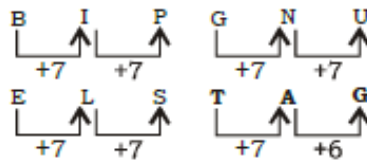
$(13)^2 = 169 \Rightarrow$  reverse the digit = 961

$(16)^2 = 256 \Rightarrow$  reverse the digit = 652

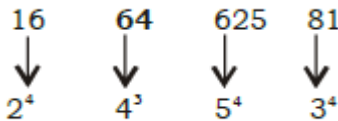
**$(15)^2 = 225 \Rightarrow$  reverse the digit = 522**

$(26)^2 = 676 \Rightarrow$  reverse the digit = 676

7. (C)



8. (B)

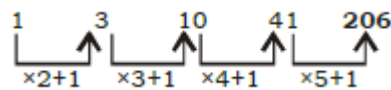


9. (D)

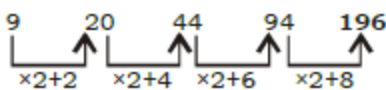
Cause

10. (C)

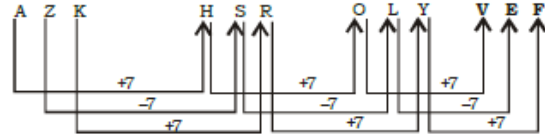
11. (C)



12. (D)



13. (C)



14. (D)

$$18 \div 6 \times 7 - 5 + 2 = 18$$

15. (B)

ATQ,

$$\text{Age of Amit} = \frac{18}{3} = 6 \text{ years}$$

$$\text{Then, } 18 + x = 2(6 + x)$$

$$\Rightarrow 18 + x = 12 + 2x$$

$$\Rightarrow x = 6$$

Hence, Required Age =  $18 + 6 = 24$  years

16. (C)

$$6 \times 5 = 3 \times 10$$

$$2 \times 8 = 4 \times 4$$

$$4 \times 6 = 3 \times 8$$

$$5 \times 9 = 3 \times 15$$

17. (B)

$$6 \times \frac{1}{2} + 11 \times 2 = 25$$

$$8 \times \frac{1}{2} + 6 \times 2 = 16$$

$$12 \times \frac{1}{2} + 5 \times 2 = 16$$

18. (C)

$$\sqrt{25} + \sqrt{81} + \sqrt{16} = 18$$

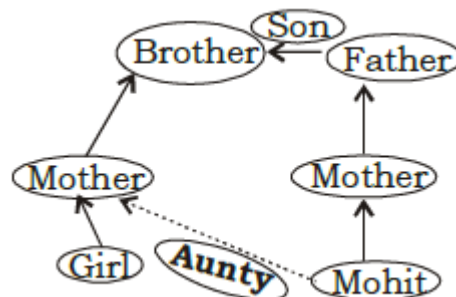
$$\sqrt{36} + \sqrt{9} + \sqrt{49} = 16$$

$$\sqrt{64} + \sqrt{4} + \sqrt{100} = 20$$

19. (A)

20. (B)

21. (A)



22. (C)

S I T E  
↓ ↓ ↓ ↓

As, H R G V Reverse  
arrange in alphabetic order i.e. GHRV.

E N D  
↓ ↓ ↓

Similarly, V M W Reverse  
arrange in alphabetic order i.e. MVW

23. (D)

24. (D)

25. (C)

51. (D)

$$3^2 + 7^2 + 11^2 + 15^2 - 2^2 - 6^2 - 10^2 - 14^2$$

$$= 3^2 - 2^2 + 7^2 - 6^2 + 11^2 - 10^2 + 15^2 - 14^2$$

$$= 5 + 13 + 21 + 29 = \mathbf{68}$$

[ Using  $a^2 - b^2 = (a - b)(a + b)$  ]

52. (C)

ATQ,

$$\text{Total sum} = \frac{n}{2} (a + l) = \frac{25}{2} \times (1 + 25) = 325$$

$$\text{Hence, Required number} = 325 - 301 = \mathbf{24}$$

53. (C)

ATQ,

$$10^{\text{th}} \text{ Number} = 10 \times 82 + 10 \times 129 - 19 \times 111$$

$$= 2110 - 2099 = \mathbf{1}$$

54. (A)

ATQ,

$$\frac{11 \times 19 + x - 11}{12} = x$$

$$\Rightarrow 11 \times 19 - 11 = 12x - x$$

$$\Rightarrow 18 \times 11 = 11x$$

$$\Rightarrow x = 18$$

$$\text{Hence, total amount} = 18 \times 12 = \text{Rs.} \mathbf{216}$$

55. (B)

ATQ,

Let Total profit = 1000

$$\text{then, } Y + Z = 1000 \times \frac{3}{5} = 600 \text{ -----(i) and,}$$

$$X + Z = 1000 \times \frac{5}{8} = 625 \text{ -----(ii)}$$

from equation (i) and (ii),

$$Z = 600 + 625 - 1000 = 225$$

$$\Rightarrow X = 400 \text{ and } Y = 375$$

Hence, X : Y : Z

$$400 : 375 : 225$$

$$\mathbf{16 : 15 : 9}$$

56. (C)

ATQ,

$$x^3 + \frac{1}{x^3} = 3$$

taking cube on both side

$$x^9 + \frac{1}{x^9} = 3^3 - 3 \times 3 = \mathbf{18}$$

57. (A)

ATQ,

$$\frac{p^2 + q^2}{pq} = \frac{r^2 + s^2}{rs}$$

$$\Rightarrow \frac{p}{q} + \frac{q}{p} = \frac{r}{s} + \frac{s}{r}$$

$$\Rightarrow \frac{p}{q} = \frac{r}{s} \text{ or } \frac{p}{q} = \frac{s}{r}$$

$$\Rightarrow \frac{p - q}{p + q} = \frac{r - s}{r + s} \text{ or } \frac{p - q}{p + q} = \frac{s - r}{s + r}$$

Hence,  $(p - q) / (p + q) = (r - s) / (r + s)$

58. (C)

ATQ,

$$\frac{40 \times x}{100} - \frac{(60 - x)}{100} \times 10 = 4$$

$$\Rightarrow 40x + 10x - 600 = 400$$

$$\Rightarrow 50x = 1000 \Rightarrow x = 20$$

Hence, Cost price of pencil = Rs. **20**

59. (A)

ATQ,

$$\text{Total amount} = 24000 \times \frac{135}{100} \times \frac{135}{100}$$

$$= \text{Rs.} \mathbf{43740}$$

60. (C)

ATQ,

$$\frac{x}{(70 - 60) \times \frac{5}{18}} = 162 \Rightarrow x = 450$$

Hence, Total length of fast train = **450m**

61. (B)

ATQ,

$$\text{Let the distance} = \text{LCM of } (60, 80 \text{ and } 100)$$

$$= 1200$$

then, Time for one-third =  $\frac{400}{60} = 6\frac{2}{3}$  hr

Time for one-fourth =  $\frac{300}{80} = 3\frac{3}{4}$  hr

Time for remaining =  $\frac{1200 - 400 - 300}{100} =$

5hr Hence, Average speed =  $\frac{1200}{\frac{20}{3} + \frac{15}{4} + 5}$

$= \frac{1200 \times 12}{185} = 77\frac{31}{37}$  kmph

62. (B)

ATQ,

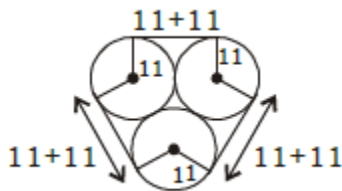
$2\pi r = 176$

$\Rightarrow r = 28$  cm

then,  $l = \sqrt{96^2 + 28^2} = 100$  cm

Hence, Total surface area =  $\frac{22}{7} \times 28 \times 128$   
 $= 11264\text{cm}^2$

63. (B)



Required length =  $22 \times 3 + 3 \times \frac{120^\circ}{360} \times 2 \times$   
 $\pi \times 11$   
 $= 66 + 22\pi$

64. (B)

ATQ,

$x + \frac{1}{x} = 7$

square on both sides,

$\Rightarrow x^2 + \frac{1}{x^2} = 47$

cube on both sides,

$\Rightarrow x^6 + \frac{1}{x^6} = (47)^3 - 3 \times 47$   
 $= 103823 - 141 = 103682$

65. (C)

ATQ,

$4x^2 + 4 = 12x$

$\Rightarrow x + \frac{1}{x} = 3$

Taking square on both sides,

$\Rightarrow \left(x + \frac{1}{x}\right)^2 = 9$

Taking square on both sides,

$\Rightarrow \left(x + \frac{1}{x}\right)^4 = 81$

66. (B)

A	:	B
$20000 \times x$	:	$25000 \times y$
$4x$	:	$5y$

then  $\frac{4x}{5y} = \frac{1}{2}$

$\Rightarrow x : y = 5 : 8$

Hence, Required ratio = **5 : 8**

67. (B)

$x + x + 2 + x + 4 + x + 6 + x + 8 + x + 10 =$   
 $25 \times 6$

$\Rightarrow x = 20$

Hence, Required average =  $\frac{25 \times 6 + 32}{7}$   
 $= 26$

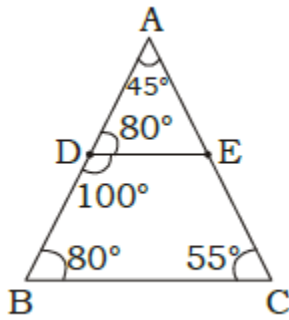
68. (C)

ATQ,

$$\frac{\cos A + \cos B}{\sin A + \sin B} = \frac{2 \cos\left(\frac{A+B}{2}\right) \cos\left(\frac{A-B}{2}\right)}{2 \sin\left(\frac{A+B}{2}\right) \cos\left(\frac{A-B}{2}\right)}$$

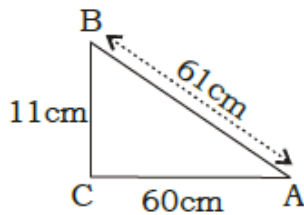
$$= \frac{\cos\left(\frac{A+B}{2}\right)}{\sin\frac{A+B}{2}} = \cot\left(\frac{A+B}{2}\right)$$

69. (A)



DE  $\parallel$  BC  
 because D and E are the mid point of AB  
 and AC  
 then,  $\angle ABC = 180^\circ - 45^\circ - 55^\circ = 80^\circ = \angle$   
 ADE  
 then,  $\angle BDE = 180^\circ - 80^\circ = 100^\circ$

70. (B)  
 ATQ,



$$\begin{aligned} \text{Circum- radius} &= \frac{AB}{2} = \frac{\sqrt{60^2 + 11^2}}{2} \\ &= \frac{61}{2} = 30.5\text{cm} \end{aligned}$$

71. (B)  
 ATQ,

$$\begin{aligned} \frac{\sin^2 A}{\cos^2 A} - \sin^2 A &= \frac{\sin^2 A (\sec^2 A - 1)}{\sec^2 A} \\ &= \frac{\sin^2 A \tan^2 A}{\sec^2 A} = \sin^4 A \end{aligned}$$

72. (C)

ATQ,

$$\angle ABC = \angle CBO + \angle OBA = 40^\circ + 35^\circ = 75^\circ$$

$$\text{then, } \angle AOC = 2 \angle ABC = 2 \times 75^\circ = 150^\circ$$

73. (A)

ATQ,

$$\text{Required percent} = \frac{250}{750} \times 100 = 33.33\%$$

74. (D)

ATQ,

$$\begin{aligned} \text{Total number} &= 250 + 300 + 200 + 400 + \\ &\quad 350 + 250 + 350 + 250 + \\ &\quad 150 \\ &= 2500 \end{aligned}$$

75. (C)

ATQ,

$$\begin{aligned} \text{Total Hockey's players} &= 200 + 250 + 150 \\ &= 600 \end{aligned}$$

## RAILWAY MOCK TEST – 3(ANSWER)

1. (A)	26. (C)	51. (D)
2. (A)	27. (D)	52. (C)
3. (B)	28. (C)	53. (C)
4. (C)	29. (B)	54. (A)
5. (D)	30. (A)	55. (B)
6. (C)	31. (D)	56. (C)
7. (C)	32. (B)	57. (A)
8. (B)	33. (C)	58. (C)
9. (D)	34. (B)	59. (A)
10. (C)	35. (D)	60. (C)
11. (C)	36. (B)	61. (B)
12. (D)	37. (C)	62. (B)
13. (C)	38. (C)	63. (B)
14. (D)	39. (B)	64. (B)
15. (B)	40. (D)	65. (C)
16. (C)	41. (C)	66. (B)
17. (B)	42. (D)	67. (B)
18. (C)	43. (D)	68. (C)
19. (A)	44. (B)	69. (A)
20. (B)	45. (B)	70. (B)
21. (A)	46. (C)	71. (B)
22. (C)	47. (D)	72. (C)
23. (D)	48. (A)	73. (A)
24. (D)	49. (C)	74. (D)
25. (C)	50. (A)	75. (C)