

Quant Mega Quiz for RRB NTPC (Solutions)

S1 Ans.(c)

Sol. $\frac{22}{7} \times r^2 \times 784 = 246400$

$r = 10 \text{ cm.}$

S2. Ans.(b)

Sol.

$$\Rightarrow \frac{(2 \sin 45^\circ \cos 30^\circ)(-2 \cos 45^\circ \sin 30^\circ)}{(2 \cos 45^\circ \cos 30^\circ)(-2 \sin 45^\circ \sin 30^\circ)}$$

$\Rightarrow 1$

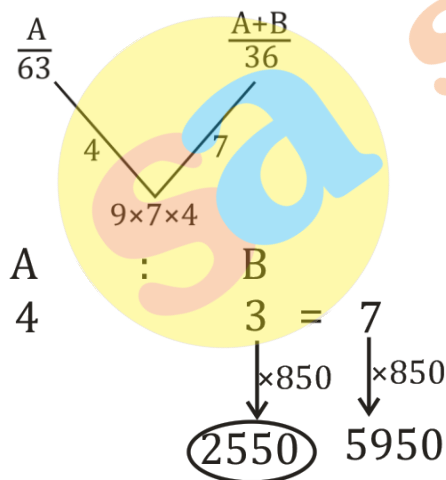
S3. Ans.(b)

Sol. $x + \frac{1}{x} = 4$

$x^4 + \frac{1}{x^4} = 194$

S4. Ans.(d)

Sol.




S5. Ans.(b)

Sol. $\frac{1}{3} \pi r^2 \times h = 4620$

$h = \frac{3 \times 4620}{1386}$

$= 10\text{m}$

TEST SERIES
Bilingual



**RRB NTPC
PREMIUM**

100+ TOTAL TESTS

Validity : 12 Months

S6. Ans.(a)**Sol.** Let total capacity of pond = 16 unit

On 42th day, water in pond = 16 unit

On 41th day, water in pond = 8 unit

On 40th day, water in pond = 4 unit

On 39th day, water in pond = 2 unit

On 38th day, water in pond = 1 unit

On 38th day pond is filled with $\frac{1}{16}$ of total capacity.**S7. Ans.(a)****Sol.**

$$\begin{array}{r} 2800 \quad 1750 \\ \quad \quad \quad \diagdown \quad \diagup \\ \quad \quad \quad 2150 \\ \quad \quad \quad \diagup \quad \diagdown \\ 400 \quad : \quad 650 \\ 8 \quad : \quad 13 \end{array}$$

S8. Ans.(b)**Sol.**

Ram	Pankaj	Atul
7	42	4
12	12	7
<hr/>		
3	: 18	: 1 = 22

\downarrow 5060 \downarrow $22 \times 5060 = 111,320$

S9. Ans.(c)**Sol.** Max 26 numbers may be greater than zero.**S10. Ans.(b)****Sol.** Let the fraction be x \therefore ATQ,

$$x - \frac{2}{x} = \frac{7}{15}$$

$$\Rightarrow x^2 - 2 = \frac{7x}{15}$$

$$\Rightarrow 15x^2 - 30 = 7x$$

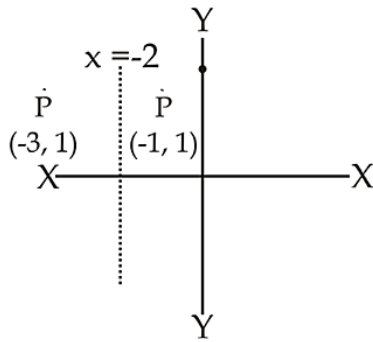
$$\Rightarrow 15x^2 - 7x - 30 = 0$$

On solving

$$x = \frac{5}{3}$$

S11. Ans.(a)

Sol.



S12. Ans.(c)

Sol. $ax - 4y = -6$

$$\Rightarrow 4y = ax + 6$$

$$\Rightarrow y = \frac{a}{4}x + \frac{6}{4}$$

$$\therefore \text{slope} = \frac{a}{4} = \frac{-3}{2}$$

$$\therefore a = -6$$

S13. Ans.(b)

Sol. No. of shoes of Reebok brand

$$= 23\% \times 1200 = 276$$

S14. Ans.(a)

Sol. Difference = $8\% \times 1200$

$$= 96$$

S15. Ans.(c)

Sol. Difference is same as 5% in (c).

S16. Ans.(b)

Sol. No. of Puma shoes = $21\% \times 1200$

$$= 252$$

No. of Nike shoes = 216

$$\therefore \% \text{ more} = \frac{252-216}{216} \times 100$$

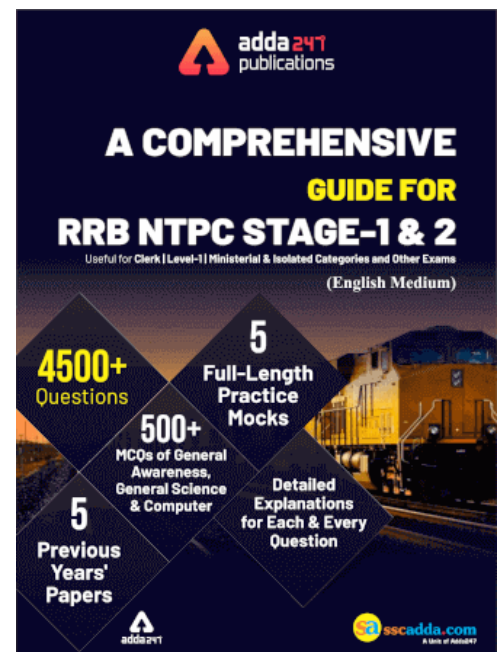
$$= 16.67\%$$

S17. Ans.(b)

Sol. Given then,

Literate people in city 4

$$= \frac{600000}{100} \times 63 = 378000$$



S18. Ans.(c)**Sol.**

$$\text{Req. ratio} = \frac{\frac{220000}{100} \times \frac{85}{11} \times 7}{\frac{200000}{100} \times \frac{58}{5} \times 3} = \frac{1190}{696} = \frac{595}{348}$$

S19. Ans.(a)**Sol.** Total population of city 5

$$= \frac{\left[\frac{259210}{7} \times 16 \right]}{92} \times 100 = 644000$$

S20. Ans.(d)**Sol.** City 1 = 80% of 250000 = 200000

City 2 = 85% of 200000 = 170000

City 3 = 78% of 220000 = 171600

City 4 = 63% of 300000 = 189000

City 5 = 92% of 150000 = 138000

City 6 = 58% of 400000 = 232000

So, city 6 > city 1 > city 4 > city 3 > city 2 > city 5

S21. Ans.(c)**Sol.** $x^2 - 2xy + y^2 + x^2 + 6x + 9 = 0$

$$(x - y)^2 + (x + 3)^2 = 0$$

$$x = -3$$

$$y = x = -3$$

$$\Rightarrow 4x^3 - x^3 + x^4$$

$$\Rightarrow 3x^3 + x^4$$

$$\Rightarrow x^3 (3 + x)$$

$$\Rightarrow -27 (3 - 3)$$

$$\Rightarrow 0$$

S22. Ans.(a)

$$\text{Sol. } \frac{\sin^2 \theta}{\sin^2 \theta \left(\frac{1}{\cos^2 \theta} - 1 \right)} = 3$$

$$\cot \theta = \sqrt{3}$$

$$\theta = 30^\circ$$

$$\Rightarrow \tan 30^\circ + \sec 30^\circ = \frac{1}{\sqrt{3}} + \frac{2}{\sqrt{3}} = \sqrt{3}$$

S23. Ans.(c)**Sol.** 7th = 8th = 9th = x

$$\text{Req. ratio} = \frac{x}{x} = 1 : 1$$

S24. Ans.(b)

$$\text{Sol. } 529 = \frac{100 \times R^2}{100}$$

$$R = 23\%$$

So Rate of interest = 23%

S25. Ans.(d)

Sol.

A	B	C	
96.8	88	100	= 284.8
		↓ ×200	↓ ×200
		20,000	56960



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