Quant Sunday Mega Quiz For RRB NTPC

Q1. 12 persons working 8 hours a day can complete a work in 10 days. In how many days 18 persons working 7 hours day will complete 70% of work?

(a) 9 days

(b) $5\frac{1}{3} \text{ days}$

(c) $6\frac{1}{5} \text{ days}$

(d) $4\frac{1}{2} \text{ days}$

Q2. Let Δ ABC ~ QPR and $\frac{ar(ABC)}{ar(PQR)} = \frac{1}{16}$. If AB = 3 cm, BC= 5 cm an AC = 7 cm, then PQ is equal to –

(a) 12 cm

(b) 9 cm

(c) 15 cm

(d) 18 cm

Q3. ABCD is a cyclic quadrilateral such that AB is a diameter of the circle circumscribing it and ꝺ ADC = 145°. What is the measure of the ∠ BAC?

(a) 65°

(b) 75°

(c) 45°

(d) 55°

Q4. From the top of a 100 m high tower, the angle of depression of the top of a pole is 30° and the angle of depression of the foot of the pole is θ, such that $\tan \theta = \frac{2}{3}$. What is the height of the pole?

(a) $50(2 - \sqrt{3})\text{m}$

(b) $50(2 + \sqrt{3})\text{m}$

(c) $100(2 + \sqrt{3})\text{m}$

(d) $100(2 - \sqrt{3})\text{m}$

Q5. What is the ratio of mean proportion between 4.9 and 16.9 and third proportion between 3 and 7?

(a) 61 : 59

(b) 11 : 13

(c) 43 : 57

(d) 39 ; 70

Q6. If $x + \frac{1}{x} = 3$, find $x^5 + \frac{1}{x^5}$

(a) 125

(b) 128

(c) 123

(d) 121

Q7. If sec 3x = cosec (4x–35°), then x equal to –

(a) 19.2

(b) 18.3

(c) 17.8

(d) 14.7

Q8. A cuboid of edge 32 cm, 8 cm, 6 cm, is cut to form cube of edge 4 cm each. What is the sum of total surface area of all cubes formed?

(a) 2304 cm²

(b) 2010 cm²

(c) 2107 cm²

(d) 2086 cm²

Q9. If $a^3 - b^3 = 4104$ and (a–b) = 6, find $(a+b)^2 - ab$ is eqal to–

(a) 592

(b) 684

(c) 618

(d) 612

Q10. In an examination, 33% passed in science and 57% failed in mathematics. If 41% failed in both subjects, what percentage passed in both subjects?

(a) 21%

(b) 23%

(c) 17%

(d) 27%

Q11. Two inlet pipes A and B can fill the tank in 12 min and 36 min respectively. Both the pipes are opened together and after some time pipe A is closed. If the tank gets filled in 20 minutes, then for how many minutes pipe A was open?

(a) $4\frac{2}{3}$

(b) $5\frac{1}{3}$

(c) $5\frac{6}{7}$

(d) $6\frac{2}{3}$

Q12. The difference between simple and compound interest on Rs 1000 for 3 yrs at 5% p.a. interest is

(a) Rs 7.625

(b) Rs 7.565

(c) Rs 5.512

(d) Rs 4.325

Q13. Final the value of x in the following expression:

4[3x – 9] = 12 [7x + 3]

(a) 0

(b) 1

(c) -1

(d) 2

Q14. The sum of ages of Raju and Sonu is 35 yrs. The product of their ages is 306. What are their present ages in yrs?

(a) 17 and 15

(b) 20 and 15

(c) 19 and 16

(d) 18 and 17

Q15. A train runs at 54 kmph. If it takes 15 seconds to cross pole, then what is the length of the train in meters ?

(a) 175 m

(b) 225 m

(c) 125 m

(d) 300 m

Q16. If $\tan A = \frac{3}{4}$, then $1 - \left\{ \frac{1 - cos^2 A}{1 - sin^2 A} \right\} + 1 =?$

(a) 3/5

(b) 25/16

(c) 23/16

(d) 5/6

Q17. How many factors of the number 100 are perfect squares?

(a) 3

(b) 5

(c) 1

(d) 4

Q18. A and B together can do a task in 5 days and the total units of work to be done is 40 units. If A alone can finish the task in 20 days, then how many days B will take to finish the task if he does alone?

(a) $5\frac{2}{5}$

(b) $6\frac{2}{3}$

(c) $4\frac{1}{2}$

(d) $7\frac{1}{3}$

Q19. What is the volume of water required to fill 2/3 rd of a cylindrical tank whose height is 18 cm and radius is 2 cm?

(a) 24 π cm³

(b) 36 π cm³

(c) 48 π cm³

(d) 64 π cm³

Q20. One of the quadrants of a circle is split into two equal sectors. What is the angle made at the center by each sector?

(a) 30°

(b) 45°

(c) 60°

(d) 90°

Q21. Two trains of length 140 m and 100 m long are going on a parallel track in same direction at a speed of 90 kmph and 18 kmph respectively. What is the time taken for the trains to cross each other completely?

(a) 12 sec

(b) 10 sec

(c) 16 sec

(d) 24 sec

Q22. If a pizza is cut into eight equal parts, then what is the angle made by each sector?

(a) 360°

(b) 90°

(c) 180°

(d) 45°

Q23. A man sells a product for Rs 2970 with a profit of 10%. What is the cost price of the product?

(a) Rs 2650

(b) Rs 2850

(c) Rs 2750

(d) Rs 2700

Q24. Ajitha borrowed Rs 90,000 at 10% per annum simple interest. On the same day, she lent the sum to her friend at the same rate but compounded annually. How much does she gain at the end of 3 yrs?
(a) Rs 2790
(b) Rs 2810
(c) Rs 2800
(d) Rs 2570

Q25. Amit and Bhanu together have Rs 1500. If ¼ th of Amit's amount is equal to ½ th of Bhanu's, then how much amount Amit has?
(a) 500
(b) 1000
(c) 1250
(d) 200