Quantitative Aptitude 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) $5\frac{1}{3}$ days

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

(d) $4\frac{1}{2}$ 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 ∠ 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) $50(2-\sqrt{3})$m

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

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

(d) $100(2-\sqrt{3})$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 cm^2

(b) 2010 cm^2

(c) 2107 cm^2

(d) 2086 cm^2

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 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

Q12. 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°

Q13. 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

Q14. 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

Q15. 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

Q16. Anand switched on a bulb at 1 : 23 : 45 hrs and switch it off on the same day at 5 : 43 : 21 hrs. For how long was the bulb in switch on mode?
(a) 4 : 20 : 24
(b) 4 : 40 : 06
(c) 4 : 19 : 36
(d) 3 : 20 : 36

Q17. If angles of a triangle are in the ratio 3 : 4 : 5, then the angles are

(a) 30°, 40°, 50°
(b) 45°, 60°,75°
(c) 60°, 80°, 100°
(d) 48°, 64°, 80°

Q18.

If $2\cos^2 x - \sin^2 x = -1/4$

And $0° \leq x \leq 90°$, then x = ?

(a) 30°
(b) 60°
(c) 90°
(d) 45°

Q19.

If $a + \frac{1}{a} = 3, then\ a^4 + \frac{1}{a^4} = ?$

(a) 47
(b) 62
(c) 23
(d) 51

Q20.

Find the value of

$(20 + (2\times10) \div (2 + 3) - 2) + 1$

(a) 20
(b) 23
(c) 26
(d) 10

Q21. The difference between simple and compound interest (compounded annually) on a sum of money for 2 years at 10% per annum is Rs. 65. The sum is

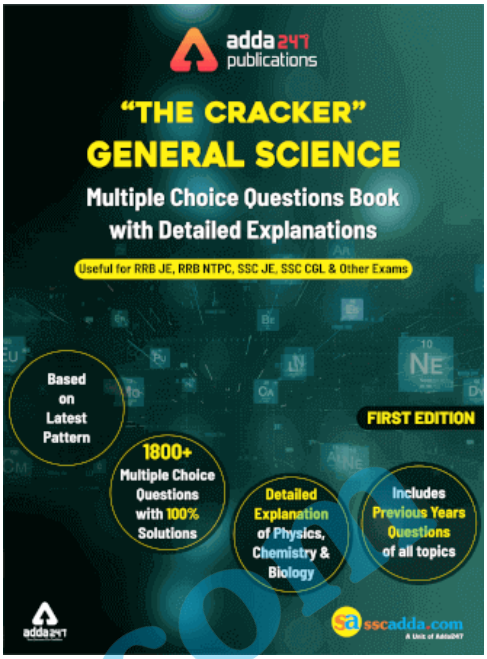
(a) Rs. 65650
(b) Rs. 65065
(c) Rs. 6565
(d) Rs. 6500

Q22. The compound interest on a certain sum of money invested for 2 years at 5% per annum is Rs. 328. The simple interest on the sum, at the same rate and for the same period will be:

(a) Rs. 320
(b) Rs. 308
(c) Rs. 300
(d) Rs. 287

Q23. A sum of money is invested at 20% compound interest (compounded annually). It would fetch Rs. 723 more if interest is compound half-yearly. The sum is

(a) Rs. 72,300
(b) Rs. 30,000
(c) Rs. 20,000
(d) Rs. 7,500



Q24. A tank of oil was 4/5 full. When 6 bottles of oil was taken out and 4 bottles of oil was poured into it, it was 3/4 full. How many bottles of oil can fill the tank?

(a) 10
(b) 20
(c) 30
(d) 40

Q25.

The value of $\frac{1}{\sqrt{7}-\sqrt{6}}-\frac{1}{\sqrt{6}-\sqrt{5}}+\frac{1}{\sqrt{5}-2}-\frac{1}{\sqrt{8}-\sqrt{7}}+\frac{1}{3-\sqrt{8}}$ is

$\frac{1}{\sqrt{7}-\sqrt{6}}-\frac{1}{\sqrt{6}-\sqrt{5}}+\frac{1}{\sqrt{5}-2}-\frac{1}{\sqrt{8}-\sqrt{7}}+\frac{1}{3-\sqrt{8}}$ का मान कितना है

(a) 0
(b) 1
(c) 5
(d) 7