Quant Mega Quiz for SSC Tier - 1

Q1. The surface area of a cube is 600 cm². The length of its diagonal is

(a) $\frac{10}{\sqrt{3}}\ cm$

(b) $\frac{10}{\sqrt{2}}\ cm$

(c) $10\sqrt{3}$ cm

(d) $10\sqrt{2}$ cm

Q2. If the volume of a sphere is divided by its surface area, the result is 27 cms. The redjius of the sphere is

(a) 9 cm

(b) 27 cm

(c) 81 cm

(d) 243 cm

Q3. A large cube is formed by the meting of three smaller cubes of 3, 4 and 5 side. The ratio of surface are of all the smaller cubes to larger cube is

(a) 18 : 25

(b) 9 : 4

(c) 25 : 18

(d) 27 : 64

Q4. 12 spheres of same size are made from melting of a cylinder (solid) 6 cms in diameter and 6 cms in height. The diameter f each sphere is

(a) 6 cm

(b) √6 cm

(c) √2 cm

(d) 3 cm

Q5. The surface area of a cube is 150 m². The length of its diagonal is

(a) $5\sqrt{3}$

(b) 5

(c) $\frac{10}{\sqrt{3}}$

(d) 15

Q6. A cube of 1 cc volume will have surface area equal to

(a) $1/12\ cm^2$

(b) $1/24\ cm^2$

(c) $6\ cm^2$

(d) $1/36\ cm^2$

Q7. A cube of 384 cm^2 surface area is melt to make x number of small cubes each of 96 m^2 surface area.

(a) 80,000

(b) 8

(c) 8,000

(d) 800

Q8. Two circular cylinders of equal volume have their height in the ratio of 1 : 2. The ratio of their radii is

(a) $1 : \sqrt{2}$

(b) $\sqrt{2} : 1$

(c) 1 : 4

(d) 2 : 1

Q9. The water from a roof, 9 sq metre in area, flows down to a cylindrical container of 900 cm^2 base. To what height will the water rise in cylinder if there is a rainfall of 0.1 mm?

(a) 0.1 cm

(b) 0.1 metre

(c) 0.11 cm

(d) 10 cms

Q10. A 4 cms long hollow metal cylinder whose outer radius is 4.3 cms and inner radius is 1.1 cms is cast into a solid cylinder of length 12 cm. The find the radius of the solid cylinder.

(a) 2 cm

(b) 2.5 cm

(c) 2.4 cm

(d) 3 cm

Q11. The co-ordinates of the point P which divides the join of A(3, –2) and B$\left(\frac{11}{2}, \frac{21}{2}\right)$ in the ratio 2 : 3 are:

(a) (4, 3)

(b) (4, 5)

(c) $\left(4, \frac{5}{2}\right)$

(d) $\left(\frac{3}{2}, \frac{7}{2}\right)$

Q12. The length of the portion of the straight line 8x + 15y = 120 intercepted between the axes is:
(a) 14 units
(b) 15 units
(c) 16 units
(d) 17 units

Q13. The equation of the line passing through the point (1, 1) and perpendicular to the line 3x + 4y – 5 = 0, is:
(a) 3x + 4y – 7 = 0
(b) 3x + 4y + k = 0
(c) 3x – 4y – 1 = 0
(d) 4x – 3y – 1 = 0

Q14. The equation of a line passing through the point (5, 3) and parallel to the line 2x – 5y + 3 = 0, is:
(a) 2x – 5y – 7 = 0
(b) 2x – 5y + 5 = 0
(c) 2x – 2y + 5 = 0
(d) 2x – 5y = 0

Q15. The sides PQ, QR, RS and SP of a quadrilateral have the equations x + 2y = 3, x = 1, x – 3y = 4, 5x + y + 12 = 0 respectively, then the angle between the diagonals PR and QS is:
(a) 30°
(b) 45°
(c) 60°
(d) 90°

Q16. Rs. 2500 was borrowed for 3 years. What will be the compound interest if the rate of interest for first year is 3% per annum, second year is 4% per annum and for third year is 5% per annum respectively?
(a) 311.90
(b) 440
(c) 450
(d) 410.80

Q17. A sum of money becomes 16 times of itself in 2 years if compounded half yearly. How much time it will take to become 27 times if compounded yearly.
(a) 3 years
(b) 4 years
(c) 5years
(d) 6 years

Q18. The difference of S.I and C.I on an amount of Rs. 30000 for 2 years is Rs. 147. What is the rate of Interest?

(a) 8 %
(b) 10 %
(c) 9 %
(d) 7 %

Q19. If the ratio of difference of S.I and C.I. for two years and 3 years is 4:13 . Find the rate of interest.

(a) 20 %
(b) 25 %
(c) 30 %
(d) 40 %

Q20. Rs. 39030 is divide between 'a' and 'b' in such a way that amount given to 'a' on C.I. in 7 years is equal to amount given to 'b' on C.I. in 9 years. Find the part of 'a'. If the rate of interest is 4%.

(a) 20200
(b) 20900
(c) 20280
(d) 20100

Q21. Three cars leave A for B in equal time intervals. They reach B simultaneously and then leave for Point C which is 240 km away from B. The first car arrives at C an hour after the second car. The third car, having reached C, immediately turns back and heads towards B. The first and the third car meet a point that is 80 km away from C. What is the difference between the speed of the first and the third car?

(a) 60 kmph
(b) 80 kmph
(c) 20 kmph
(d) 40 kmph

Q22. Mr. X decides to travel from Delhi to Gurgaon at a uniform speed and decides to reach Gurgaon after T hr. After 30 km, there is some engine malfunction and the speed of the car becomes 4/5th of the original speed. So, he travels the rest of the distance at a constant speed 4/5th of the original speed and reaches Gurgaon 45 minutes late. Had the same thing happened after he travelled 48 km, he would have reached only 36 minutes late. What is the distance between Delhi and Gurgaon?

(a) 90 km
(b) 120 km
(c) 20 km
(d) 40 km

Q23. Tom, Jerry and Bill start from point A at the same time in their cars to go to B. Tom reaches point B first and turns back and meets Jerry at a distance of 9 miles from B. When Jerry reaches B, he too turns back and meets Bill at a distance of 7 miles from B. If 3 times the speed with which Tom drives his car is equal to 5 times Bill's speed, what could be the distance between the points A and B

(a) 40 miles

(b) 24 miles

(c) 31 miles

(d) 63 miles

Q24. Two trains start together from a Station A in the same direction. The second train can cover 1.25 times the distance of first train in the same time. Half an hour later, a third train starts from same station and in the same direction. It overtakes the second train exactly 90 minutes after it overtakes the first train. What is the speed of third train, if the speed of the first train is 40 Km/hr?

(a) 20 Km/hr

(b) 50 Km/hr

(c) 60 Km/hr

(d) 80 Km/hr

Q25. Two trains left from two stations P and Q towards station Q and station P respectively. 3 hours after they met, they were 675 Km apart. First train arrived at its destination 16 hours after their meeting and the second train arrived at its destination 25 hours after their meeting. How long did it take the first train to make the whole trip?

(a) 18h

(b) 36h

(c) 25h

(d) 48h

Q26. A bus starts from a bus stop P and goes to another bus stop Q. In between P and Q, there is a bridge AB of certain length. A man is standing at a point C on the bridge such that AC : CB = 1 : 3. When the bus starts at P and if the man starts running towards A, he will meet the bus at A. But if he runs towards B, the bus will overtake him at B. Which of the following is true?

(a) Bus travels 3x times faster than the man

(b) Bus travels 2x times faster than the man

(c) The bus and the man travel at the same speed

(d) 4x the speed of the man is equal to 3x the speed of the bus

Q27. Two friends A and B leave City P and City Q simultaneously and travel towards Q and P at constant speeds. They meet at a point in between the two cities and then proceed to their respective destinations in 54 minutes and 24 minutes respectively. How long did B take to cover the entire journey between City Q and City P?

(a) 60
(b) 36
(c) 24
(d) 48

Q28. A man travels 450 km to his home partly by train and partly by car. He takes 8 hrs 40 min if he travels 240 km by train and rest by car. He takes 20 mins more if he travels 180 km by train and the rest by car. The speed of the car in km/hr is

(a) 45
(b) 50
(c) 60
(d) 48

Q29. Train A travelling at 63 kmph takes 27 to sec to cross Train B when travelling in opposite direction whereas it takes 162 seconds to overtake it when travelling in the same direction. If the length of train B is 500 meters, find the length of Train A.

(a) 400 m
(b) 810 m
(c) 500 m
(d) 310 m

Q30. Akash when going slower by by 15 Km/hr, reaches late by 45 hours. If he goes faster by 10 Km/hr from his original speed, he reaches early by by 20 hours than the original time. Find the distance he covers.

(a) 8750 Km
(b) 9750 Km
(c) 1000 Km
(d) 3750 Km