# Quant Mega Quiz for SSC Tier - 1

**Q1. X starts a business with Rs 80000. After 6 months Y joins X with Rs 100000. After 2 years, what will be the ratio of profit of X and Y?**

(a) 16 : 15
(b) 4 : 5
(c) 8 : 9
(d) 14 : 15

**Q2. The elevation of a tower at a station A due north of it is α and at a station B due west of A is β. Then the height of the tower is —**

(a) $\frac{AB \sin\alpha \sin\beta}{\sqrt{\sin^2\alpha - \sin^2\beta}}$

(b) $\frac{AB \sin\alpha \cos\beta}{\sqrt{\sin^2\alpha - \sin^2\beta}}$

(c) $\frac{AB \sin\alpha \sec\beta}{\sqrt{\sin^2\alpha - \sin^2\beta}}$

(d) $\frac{AB \operatorname{cosec}\alpha \sin\beta}{\sqrt{\sin^2\alpha - \sin^2\beta}}$

**Q3. What is the average of all the one digit and two digit natural numbers?**

(a) 25
(b) 40
(c) 50
(d) 99

**Q4. A right angled isosceles triangle is inscribed in a semi-circle of radius 7 cm. The area enclosed by the semi-circle but exterior to the triangle is**

(a) 14 $cm^2$
(b) 28 $cm^2$
(c) 44 $cm^2$
(d) 68 $cm^2$

**Q5. In an isosceles triangle DEF, ∠D = 110°. If I is the incentre of the triangle, then what is the value (in degrees) of ∠EIF?**

(a) 110
(b) 130
(c) 145
(d) 155

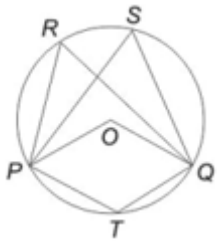
**Q6. If (1/3.197) = 0.3127, find the value of (1/0.0003197).**
(a) 3127
(b) 3197
(c) 312.7
(d) 0.3127

**Q7. A man bought one cow & one goat at Rs. 2500. He sold cow at 20% profit and goat at 30%. Find the C.P. of goat if selling price of both was same?**
(a) 1200
(b) 1300
(c) 1250
(d) None of these

**Q8. Find the successive discount of 10%, 15% and 20% is?**
(a) 40.8
(b) 38.2
(c) 38.8
(d) 39.6

**Q9. The two lines 4x+3y=0 and 7x+5y=0 will _____ in their graphical representation.**
(a) be parallel to each other
(b) intersect each other at one point only
(c) intersect each other at three points only
(d) coincide each other

**Q10. In the following figure, O is the centre of the circle and ∠PRQ = 50°. What is the value (in degrees) of ∠PTQ?**




(a) 100
(b) 75
(c) 130
(d) 150

**Q11. Raman can do a piece of work in 48 days, while Niwas can do the same work in 56 days. They started the work jointly after 12 days Chiru also joined them and thus all of them completed the remaining work in 9 days. All of them were paid total Rs. 13440. What is the share of Niwas?**
(a) 4758
(b) 5040
(c) 4480
(d) Can't be determined

**Q12.**

Find the value of

$$\left[\frac{\cos^2 A(\sin A+\cos A)}{\operatorname{cosec}^2 A(\sin A-\cos A)}+\frac{\sin^2 A(\sin A-\cos A)}{\sec^2 A(\sin A+\cos A)}\right](\sec^2 A-\operatorname{cosec}^2 A)$$

(a) 1
(b) 3
(c) 2
(d) 4

**Q13. What is the unit-digit of the sum of the first 111 whole numbers?**

(a) 5
(b) 6
(c) 1
(d) 0

**Q14. The equation $(1+a^2)x^2 + 2abx + (b^2 - c^2) = 0$ has equal roots. What is the value of $c^2(1+a^2)$ ?**

(a) $a^2$
(b) $b^2$
(c) $c^2$
(d) ab

**Q15. A trader had 511 kg of rice. He sold a part of it a 15% profit and the rest at 22% profit, so that he made a total profit of 17%. How much rice (in kg.) did he sell at 22% profit?**

(a) 211
(b) 219
(c) 146
(d) None of these

**Q16.**

$$\sqrt[r]{\frac{9^{\left(r+\frac{1}{4}\right)}\sqrt{3.3^{-r}}}{3.\sqrt{3^{-r}}}} = k, \text{ then the value of k is}$$

(a) $3$
(b) $3^2$
(c) $3^3$
(d) $\sqrt[r]{3}$

**Q17. A train has to cover a distance of 1200 km in 15 hours. What should be its average speed in meters/second?**

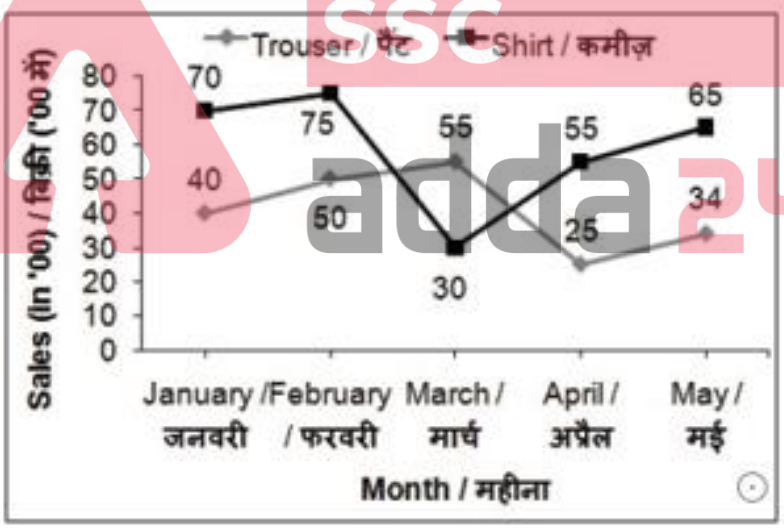
(a) 200/9 m/s
(b) 30 m/s
(c) 100/9 m/s
(d) 22.5 m/s

Q18. Altitude and base of a right angle triangle are (x + 2) and (2x + 3) (in cm). If the area of the triangle be 60 $cm^2$, the length of the hypotenuse is:
(a) 21 cm
(b) 13 cm
(c) 17 cm
(d) 15 cm

Q19. Arun start a taxi service by investing Rs. 20000. After 4 month, Chiru joins the business by investing Rs. 25000 then 3 month after Chiru joined, Dev too joins them by investing Rs. 30000. One year after Arun started the business they make Rs. 53690 in profit what is Chiru's share in the profit (in Rs.)?
(a) 18200
(b) 24740
(c) 19400
(d) 4520

Directions (20-20): The line chart given below represents the sales (in '00) of trousers and shirts for five months.

Q20.




What is the difference between sales of shirts for months January and April?
(a) 2700
(b) 1500
(c) 2000
(d) 2200

Q21. A bag contains 216 in the form of one rupee, 50paise and 25 paise coins in the ratio of 2 : 3 : 4.The number of 50 paise coins is :
(a) 96
(b) 144
(c) 114
(d) 141

**Q22. In a mixture of 45 litres, the ratio of milk and water is 4 : 1. How much water must be added to make the mixture ratio 3 : 2 ?**
(a) 72 litres
(b) 24 litres
(c) 15 litres
(d) 1.5 litres

**Q23. A started a business with Rs 4500 and another person B joined after some period with Rs 3000. Determine this period after B joined the business if the profit at the end of the year is divided in the ratio 2 : 1**
(a) After 3 months
(b) After 4 months
(c) After 6 months
(d) After 2 (1/2) months

**Q24. A cistern has two taps (which fill it in 12 min and 15 min, respectively) and an exhaust tap. When all three taps are opened together, it takes 20 min to fill the empty cistern. How long will the exhaust tap take to empty it ?**
(a) 20 min
(b) 16 min
(c) 12 min
(d) 10 min

**Q25. 12 men complete a work in 18 days. Six days after they had started working, 4 men joined them. How many days will all of them take to complete the remaining work ?**
(a) 10 days
(b) 12 days
(c) 15 days
(d) 9 days

**Q26. A motor boat whose speed is 15 km/h in still water goes 30 km downstream and comes back in four and a half hours. The speed of the stream is :**
(a) 46 km/h
(b) 6 km/h
(c) 7 km/h
(d) 5 km/h

**Q27. The L.C.M. of two number is 630 and their H.C.F. is 9. If the sum of numbers is 153, their difference is**
(a) 17
(b) 23
(c) 27
(d) 33

Q28. The average age of the family of five members is 24. If the present age of youngest member is 8 yr, then what was the average age of the family at the time of the birth of the youngest member ?
(a) 20 yr
(b) 16 yr
(c) 12 yr
(d) 18 yr



Q29. A dishonest dealer professes to sell his goods at cost price, but he uses a weight of 960 g for the kg weight. Find his gain percent.
(a) 4%
(b)4(1/6) %
(c) 96%
(d) 40%

Q30. A and B started a business by investing 35,000 and 20,000 respectively. B left the business after 5 months and C joined the business with a sum of 15,000. The profit earned at the end of the year is 84,125. What is B's share of profit?
(a) 14133
(b) 15,000
(c) 13,460
(d) Cannot be determined