

## **Quant Mega Quiz for SSC Tier-1**

- Q1. A circle is inscribed in a triangle ABC. It touches the sides AB, BC and AC at the points R, P and Q respectively. If AQ = 4.5 cm, PC = 5.5 cm and BR = 6 cm, then the perimeter of the triangle ABC is
- (a) 30.5 cm
- (b) 28 cm
- (c) 32 cm
- (d) 26.5 cm
- Q2. The table shows the production of different types of cars (in thousands)

Years	2012	2013	2014	2015	2016
A	30	35	48	45	56
В	42	48	40	38	56
C	48	36	38	35	44
D	51	24	30	46	54
E	20	42	40	35	43

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if the data related to the production of cars of type E is represented by a pie chat, then the central angle of the sector representing the data of production of cars in 2013 will be

- (a) 102°
- (b) 84°
- (c)  $70^{\circ}$
- (d)  $80^{\circ}$
- Q3. A truck covers a distance of 384 km at a certain speed, if the speed is decreased by 16 km/h, it will take 2 hrs more to cover the same distance. 75% of its original speed (in km/h) is
- (a) 45
- (b) 54
- (c)48
- (d) 42
- Q4. The ratio of the ages of A and B, four years ago, was 4:5. Eight years from now, the ratio of the ages of A and B will be 11:13. What is the sum of their present ages?
- (a) 80 yrs
- (b) 96 yrs
- (c) 72 yrs
- (d) 76 yrs



Q5. In  $\triangle$ ABC, F and E are the points on sides AB and AC, respectively, such that FE || BC and FE divides the triangle in two parts of equal area. If AD  $\perp$  BC and AD intersects FE at G, then GD:AG = ?

- (a)  $\sqrt{2}:1$
- (b)  $(\sqrt{2}-1):1$
- (c)  $2\sqrt{2}:1$
- (d)  $(\sqrt{2}+1)$ :1

If  $4-2\sin^2\theta-5\cos\theta=0$ ,  $0^\circ<\theta<90^\circ$ , then the value of  $\sin\theta+\tan\theta$  is

- (a) 2
- (b)  $^{2}$
- (c)  $3\sqrt{2}$
- (d)  $2\sqrt{3}$

Q7. The table shows the production of different types of cars (in thousands)

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What is the ratio of the total production of cars of type A in 2014 and type C in 2013 taken together to the total production of cars of type B in 2016 and type E in 2015 taken together?

- (a) 12:13
- (b) 11:12
- (c) 10:11
- (d) 12:11

Q8. if decreasing 120 by x% gives the same result as increasing 40 by x%, then x% of 210 is what percent less than (x + 20)% of 180?

- (a)
- (b)  $^{18}$
- (c)  $16\frac{2}{3}$
- (d)  $^{20}$

Q9.

If  $(5\sqrt{5}x^3 - 81\sqrt{3}y^3) \div (\sqrt{5}x - 3\sqrt{3}y) = (Ax^2 + By^2 + Cxy)$ , then the value of  $(6A + B - \sqrt{15}C)$  is

- (a) 10
- (b) 9
- (c) 15
- (d) 12

Q10. If a nine-digit number 985x3678y is divisible by 72, then the value of (4x - 3y) is

- (a) 5
- (b) 4
- (c) 6
- (d)3

Q11. The volume of a solid cylinder with height 784 cm is 246400 cm<sup>3</sup>. The radius of cylinder is—

- (a) 12
- (b) 28
- (c) 10
- (d) 14



What is the value of  $\frac{[(\sin 15^{\circ} + \sin 75^{\circ})(\sin 15^{\circ} - \sin 75^{\circ})]}{[(\cos 15^{\circ} + \cos 75^{\circ})(\cos 15^{\circ} - \cos 75^{\circ})]}$ Q12.

- (a) 0
- (b) 1
- (c) -1
- (d) 2

Q13. If  $x^2 - 4x + 1 = 0$ , then find  $x^{-1}(x^8 + 1)(x^{-3}) = ?$ 

- (a) 198
- (b) 194
- (c) 14
- (d) 196

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014. If A had worked alone he would have taken 63 hours to do the task. What is B's share, if A and B together on a task finishing it in 36 hours and they get paid Rs. 5,950 for it?

- (a) 3600
- (b) 3400
- (c) 2750
- (d) 2550

Q15. The volume of conical tent is 4620 m<sup>3</sup> and its base area is 1386 m<sup>2</sup>. The height of the tent is—

- (a) 11 m
- (b) 10 m
- (c) 12 m
- (d) 14 m

Q16. If it takes 42 days for a pond to get filled with rain water. If the level of water doubles each day. Then how long would it take to fill 1/16 of pond.

- (a) 38 days
- (b) 39 days
- (c) 32 days
- (d) 8 days

Q17. In what ratio should coffee costing Rs. 2800/kg be mixed with coffee costing Rs. 1750/kg so that the cost of the mixture is Rs. 2150/kg. (a) 8:13 (b) 13:8 (c) 7:5(d) 5:7Q18. Ram and Pankaj started a partnership business investing in the ratio of 7:42. Atul joined them after 5 months with an amount equal to  $\frac{2}{21}$ th of Pankaj. What was their profit (in Rs.) at the end of the year if Atul got Rs. 5060 as his share?

(a) 1, 10, 420 (b) 1, 11, 320

(c) 98,720

(d) 1,05,472

Q19. The average of 27 numbers is zero, out of them how many may be greater than zero, at the most?

(a) 15

(b) 20

(c) 26

(d) 0

Q20.A fraction is greater than twice its reciprocal by 7/15. What is the fraction?

(a) 3/5

(b) 5/3

(c) 3/4

(d) 4/3

Q21. The compound interest on a certain sum of money for 2 years at 5% is Rs. 328, then the sum is

(a) Rs. 3000

(b) Rs. 3600

(c) Rs. 3200

(d) Rs. 3400

Q22. The height of a cone is 30 cm. A small cone is cut off at the top by a plane parallel to the base. If its volume be  $\frac{1}{27}$ th of the volume of the given cone, at what height above the base is the section made?

(a) 19 cm

(b) 20 cm

(c) 12 cm

(d) 15 cm



Q23. ABCD is a trapezium with	AD and BC parallel side	s. E is a point on l	BC. The ratio of	the area of	ABCD to
hat of AED is					

- $\overline{AD}$
- (b) *EC* 
  - AD+BE
- (c)  $\overline{AD} + \overline{CE}$
- $\overline{AD} + \overline{BC}$  $\overline{AD}$ (d)

Q24. If the surface area of a sphere is 346.5 cm<sup>2</sup>, then its radius  $\left[taking \ \pi = \frac{22}{7}\right]$  is

- (a) 7 cm
- (b) 3.25 cm
- (c) 5.25 cm
- (d) 9 cm

Q25. An interior angle of a regular polygon is 5 times its exterior angle. Then the number of sides of the polygon is

- (a) 14
- (b) 16
- (c) 12
- (d) 18



Q26. The height of the right pyramid whose area of the base is 30 m<sup>2</sup> and volume is 500 m<sup>3</sup>, is

- (a) 50 m
- (b) 60 m
- (c) 40 m
- (d)  $20 \, \text{m}$

Q27. The base of a prism is a right angled triangle with two sides 5 cm and 12 cm. The height of the prism is 10 cm. The total surface area of the prism is

- (a) 360 sq cm
- (b) 300 sq cm
- (c) 330 sq cm
- (d) 325 sq cm

Q28. In an equilateral triangle of side 24 cm, a circle is inscribed touching its sides. The area of the remaining portion on the triangle is  $(\sqrt{3} = 1.732)$ 

- (a) 98.55 sq cm
- (b) 100 sq cm
- (c) 101 sq cm
- (d) 95 sq cm

Q29. The base of a right prism is an equilateral triangle. If the lateral surface area and volume is  $120 cm^2$ ,  $40\sqrt{3} cm^3$  respectively then the side of base of the prism is

- (a) 4 cm
- (b) 5 cm
- (c) 7 cm
- (d) 40 cm

Q30. Perimeter of a rhombus is 2p unit and sum of length of diagonals is m unit, then area of the rhombus is

(a) 
$$\frac{1}{4} m^2 p sq unit$$

(b) 
$$\frac{1}{4} mp^2 sq unit$$

(c) 
$$\frac{1}{4}(m^2-p^2)$$
 sq unit

$$\frac{1}{(d)} \frac{1}{4} (p^2 - m^2) \text{ sq unit}$$



