

Quant Mega Quiz for SSC CGL Tier - 2

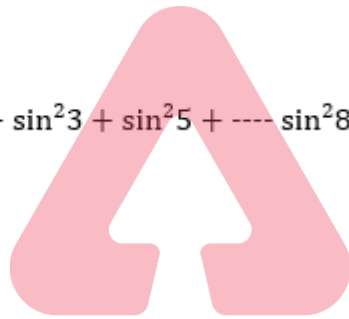
Q1.

If $\cos \theta = \sqrt{\frac{1}{7} \sqrt{\frac{1}{7} \sqrt{\frac{1}{7} \dots \infty}}}$, find $\tan \theta + \sin \theta$

- (a) $13\sqrt{7}$
- (b) $16\sqrt{3}$
- (c) $\frac{32\sqrt{3}}{7}$
- (d) $\frac{33}{19\sqrt{7}}$

Q2. Find $\sin^2 1 + \sin^2 3 + \sin^2 5 + \dots + \sin^2 89$

- (a) 21
- (b) 22
- (c) $21 \frac{1}{2}$
- (d) $22 \frac{1}{2}$



Q3. If $\operatorname{cosec} \theta + \sin \theta = 4$, then find $\cot^2 \theta - \cos^2 \theta$

- (a) 11
- (b) 14
- (c) 12
- (d) 8

Q4. If $(2x) \cos \theta + (1 - x^2) \sin \theta = 1 + x^2$, find $\tan \theta = ?$

- (a) $\frac{1-x}{2-x^2}$
- (b) $\frac{1-x^2}{1+x^2}$
- (c) $\frac{2x}{1+x^2}$
- (d) $\frac{1-x^2}{2x}$

TEST SERIES

Bilingual



SSC CGL TIER-II

PRIME

59 Total Tests | eBooks

Q5. Find $\left(\frac{\tan\theta + \sec\theta - 1}{\tan\theta - \sec\theta + 1}\right) \frac{1}{\sec\theta}$

- (a) $\cos\theta$
- (b) $1 + \sin\theta$
- (c) $1 - \sin\theta$
- (d) $\sec\theta$

Q6. If $\operatorname{cosec}\theta = 6x$ and $\operatorname{Cot}\theta = \frac{1}{6x}$, find $36x^2 + \frac{1}{36x^2}$

- (a) 1
- (b) 2
- (c) $\sqrt{5}$
- (d) $\sqrt{3}$

Q7. If $a \sec\theta - b \tan\theta = c$, find $a \tan\theta - b \sec\theta$

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

Q8. Find $\sin^2 7\frac{1}{2} + \cos^2 82\frac{1}{2} + \sin^2 81\frac{1}{2} + \cos^2 8\frac{1}{2}$

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

Q9. Two points A and B are at a distance of 49m and 121m respectively from the base of a building and on a straight line. If the angle of elevation of the top of the building from A and B are complementary. Find the height of building?

- (a) 77 m
- (b) 88 m
- (c) 99 m
- (d) 110 m

Q10. A spherical balloon of radius 14 cm, subtends an angle of 60° at the eye of an observer on the ground, while the angle of elevation of its centre is 45° find the height of its centre.

- (a) $12\sqrt{5}$ cm
- (b) $22\sqrt{2}$ cm
- (c) $26\sqrt{3}$ cm
- (d) $14\sqrt{2}$ cm



Q11. The average age of a husband and wife at the time of their marriage was 25 years. A son was born to them two years after their marriage. The present average age of all three of them is 24 years. How many years is it since the couple got married ?

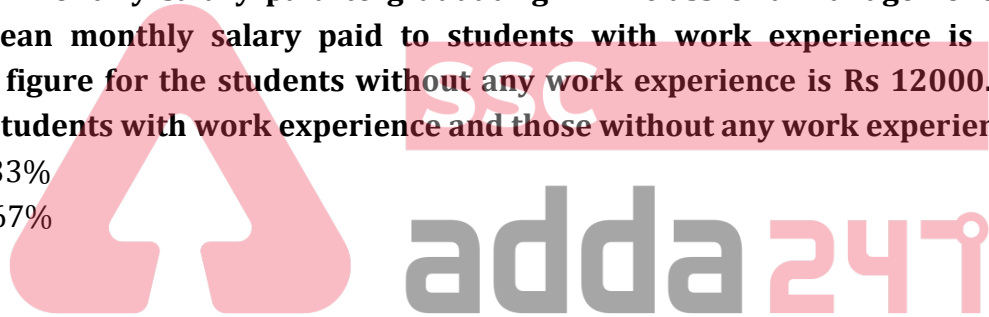
- (a) 5 years
- (b) 6 years
- (c) 8 years
- (d) 9 years

Q12. The average age of 3 children in a family is 20% of the average age of the father and the eldest child. The total age of the mother and the youngest child is 39 years. If the father's age is 26 years, what is the age of the second child ?

- (a) 15 years
- (b) 18 years
- (c) 20 years
- (d) Cannot be determined

Q13. The mean monthly salary paid to graduating MBA class of a management institute is Rs 16000. The mean monthly salary paid to students with work experience is Rs 18000. The corresponding figure for the students without any work experience is Rs 12000. Determine the percentage of students with work experience and those without any work experience in the class.

- (a) 66.67%, 33.33%
- (b) 33.33%, 66.67%
- (c) 75%, 25%
- (d) 25%, 75%



Q14. The marks of six boys in a group are 48, 59, 87, 37, 78 and 57. What are the average marks of all six boys?

- (a) 61
- (b) 65
- (c) 69
- (d) None of these

Q15. The average weight of a group of 75 girls was calculated as 47 kgs. It was later discovered that the weight of one of the girls was read as 45 kgs. Whereas her actual weight was 25 kgs. What is the actual average of the group of 75 girls ?

(Rounded off to two digits after decimal)

- (a) 46.23
- (b) 47.23
- (c) 46.73
- (d) None of these

12 Months Subscription

SSC

MAHA PACK

Live Class, Video Course,
Test Series, eBooks

Bilingual (with eBooks)

Q16. A car driver leaves Belgium at 8:30 am and expects to reach a place 300 km from Belgium at 12:30. At 10:30 he finds that he was covered only 40% of the distance. By how much he has to increase the speed of car in order to keep up his schedule.

- (a) 45 km/h
- (b) 40 km/h
- (c) 35 km/h
- (d) 30 km/h

Q17. Excluding stoppages, the speed of a DTC bus is 64 km/hr and including stoppages it is 48 km/hr. For how many minute does the bus stop per hour.

- (a) 10 minutes
- (b) 20 minutes
- (c) 15 minutes
- (d) 25 minutes

Q18. A man performs $\frac{2}{15}$ of the journey by rail, $\frac{9}{20}$ by cycle and reaming 10 km by train. The total journey is?

- (a) 15.6 km
- (b) 12.8 km
- (c) 16.4 km
- (d) 24 km

Q19. 4 hrs after a goods train passed a station, another train travelling at a speed of 72 km/hr following that goods train passed through that station. If after passing the station the train overtakes the goods train in 8 hours. What is the speed of the goods train?

- (a) 48 km/hr
- (b) 57.6 km/hr
- (c) 72 km/hr
- (d) 38.4 km/hr

Q20. A boat goes 15 km upstream and 22 km downstream in 5 hours. It goes 20 km upstream and $\frac{55}{2}$ km downstream in $\frac{13}{2}$ hours. What is the speed (in km/hr) of stream?

- (a) 3
- (b) 5
- (c) 8
- (d) 11

Q21. One day work of a man, a women & a child is in the ratio 5 : 3 : 2 & if there are 8 men, 12 women & 16 children to complete the work & if their total monthly wage is Rs 5400 which is divided in ratio of work done by a man, a women & a child then find the total wage of 10 men, 12 women in one month?

- (a) Rs 3600
- (b) Rs 4300
- (c) Rs 4500
- (d) Rs 3200

Q22. To make a toy, 30% raw material cost, 20% worker cost, 30% marketing cost and 20% packing cost occur. If price of raw material is increased by 50% then to get some profit % (20%) price has to increase 450 Rs. Find the cost of packing (in Rs.)?

- (a) 400
- (b) 500
- (c) 600
- (d) 300

Q23. Present age of mother age is 3 times the present age of his son, 5 years hence mother age will be $\frac{5}{2}$ times the age of his son. After 10 years from now mother age will be how many times of age of his son at that time.

- (a) 4 times
- (b) 3.5 times
- (c) 3 times
- (d) 2.2 times

Q24. A sum of Rs 1250 lent partly at 13% SI p.a & remaining at 17% SI per annum. If the total interest received after 3 years is Rs 525. Then find the ratio of sum lent at 13% to sum lent at 17%?

- (a) 5 : 3
- (b) 3 : 2
- (c) 1 : 3
- (d) 3 : 1

Q25. The curved surface area of hemisphere 308 cm^2 . If the radius of hemisphere is equal to the height of cylinder & ratio of height and radius of cylinder is 7 : 3 then find the total surface area of cylinder? (in cm^2)

- (a) 62π
- (b) 80π
- (c) 60π
- (d) 45π

Q26. Ratio of upstream speed of a boat to speed of river current is 4 : 1. It covers 42 km in downstream in T hours and 24 km in upstream in (T - 1) hours. Find speed of boat in still water.

- (a) 5 km/hr
- (b) 4 km/hr
- (c) 6 km/hr
- (d) 7 km/hr

Q27. A is $33\frac{1}{3}\%$ more efficient than B. They together worked for 2 days and completed $29\frac{1}{6}\%$ of total work. Then B left and another person C joined whose efficiency is 20% less than efficiency of A. Find the time in which C alone will complete whole work.

- (a) 10 days
- (b) 30 days
- (c) 20 days
- (d) 15 days

Q28. Ratio of length of 3 train A, B and C is 10 : 5 : 12. Train A completely crosses stationary train B in 15 sec and train A and C completely crosses each other moving in same direction in 50 sec. If speed of train A is 25 m/sec then find speed of train C in m/sec.

- (a) 24
- (b) 12
- (c) 14
- (d) 22

Q29. There are two container A and B. A contains mixture of milk and water in the ratio 3:Y and B contains 75 L of pure water only. 75 L of mixture from A is taken out and mixed in B so that final ratio of milk and water in the B is 3 : 7. Find value of Y.

- (a) 7
- (b) 5
- (c) 1
- (d) 2

Directions (30-30): The table given below shows the total population, total educated population and the percentage of educated male population in five different cities.

City	Total population (in thousand)	Total educated population (in thousand)	% of male in educated population
A	80	50	56
B	70	52	75
C	75	60	55
D	60	45	60
E	72	60	55

Q30. Find the average of the uneducated population of all the five cities ?

- (a) 16,000
- (b) 16,500
- (c) 18,000
- (d) 17,000

12 Months Subscription



SSC

Useful for CGL, CHSL & others

TEST PACK