Memory based Questions asked in SSC CGL Tier-2 Mathematics Paper

- Value of (sec x+ tan x- 1) / (sec x- tan x + 1)
- How many numbers are there between 400 to 700 which have two times 6 in it?
- X^2 + 1/X^2 =1; Find the value of X^6 + 1/X^6
- If x^3 + y^3 = 27. Find the value of x + y
- If x + y = 1 find the value of x^3 +3xy +y^3
- If x^3 + 1/x^3 = √3; find the value of x^6 + 1/x^6
- If the sum of three Prime numbers x+y+z is 70, where x>y>z; Find the value of x?
- A regular hexagon is formed with sides 13 cm each. Find the area of a triangle formed by joining its three consecutive vertices?
- Two circles having radius 36 cm intersect and pass through each-other's at the center. Find the length of the common chord?
- A right angled triangle has the perpendicular and the base as 24 cm each. Find the ratio between the inradius and circumradius of that triangle?
- Find the sum of 4×5+5×6+6×7+... upto 8 terms.
- The length of three sides of a triangle are x, y and z respectively, where x^2 + y^2 > z^2. Then find the type of the triangle?
- The ratio of the sides of a triangle ABC is 5:12:13. Find the value of angle A.
- Two circles are concentric to each other, where the radius of the larger and the smaller circle is R and r respectively. The difference between their area is 154 cm^2. Find the value of the difference between their radius.
- A chord of length 10 cm subtends an angle at the centre of a circle having the radius as 10 cm. What is the value of the angle subtended by the chord?
- An acid-water mixture contains 20% acids. If 10 litre water is added in the mixture, the concentration of the acid becomes 15%. Find the initial quantity of the mixture.
- 8 similar spheres are drawn out of a large sphere of radius by melting it. Find the curved surface of the small spheres.
- Triangle ABC is similar to triangle DEF. The ratio between their areas is 25:36. If the length of side AB is 4 cm, find the length of DE.
- The ratio of Milk to water kept in a container is 2:3. If 10 litre of mixture is taken out and is replaced with water, and the process is repeated two more times, find the percentage of milk left in the final mixture.
- Two cars moving at speeds of 54 Km/hr and 36 Km/hr respectively are moving towards each other. The distance between the two cars is 250 metres. Find the time taken by the cars to meet each other.
- If Sec A = 41/9; Find the value of Cot A.
- A, B and C can alone do work in 11, 22 and 33 days respectively. If A & B starts the work on day 1, they are replaced by B & C on day 2 and then on the 3rd day, C & A are on the work. How much time will they take to complete the work, if they follow the same pattern to do the work.
- The Compound Interest for two years is ₹ 8125 at the rate of 8% p.a. What will be the Simple Interest on the same principal for 2 years at the same rate of interest?

- If A can do 1/4 of the work in 16 days and B completes 2/3 of the same work in 32 days. How much time will they both take together, to complete the work?
- Find the equivalence discount for 16% and 12% of successive discounts?
- The ratio of incomes of B:C:D:E is 2:3:4:5. The income of B has increased by 20%. Similarly C gets an increment of 30%, D gets an increment of 40% and E gets an increment of 50%. Find the ratio of their increased incomes.
- Two articles are sold at the same selling price of ₹1020. There is a profit of 28% on the first article while the second article incurs a loss of 14%. Find the CP of both the articles.
- If x + y = 3; Find the value of x^3 + y^3.