Q. 1. What number could replace 'x' in : $6.4 \times 2.5 + 4.41 \div 2.1 \div x = 26$

(1) 0.21 (2) 2.1 (3) 21 (4) 10

Q. 2. The diameter of a wheel is 6.3 cm. Find the distance covered by it in 100 revolutions.

(1) 198 m (2) 198 cm (3) 19.8 m (4) 1.98 m

Q. 3. Simplify : $243^{\frac{2}{5}} \times 81^{\frac{3}{4}} \div 3^7$

(1) 0 (2) 1 (3) –3 (4) $\frac{1}{9}$

Q. 4. Solve : $\sqrt{\frac{0.64 \times 8.1}{65.61 \times 25.6}} = ?$

(1) $\frac{1}{9}$ (2) $\frac{1}{16}$ (3) $\frac{1}{18}$ (4) $\frac{3}{2}$

Q. 5. A certain number of men complete a job in 60 days. If there were 8 men more the work would have been finished in 50 days. How many men were there in the begining?

(1) 30 (2) 40 (3) 24 (4) 36

Q. 6. Find the angle whose complementary angle is one-tenth its supplementary angle.

(1) 80^o (2) 60^o (3) 50^o (4) 100^o

Q. 7. Divide 40 into two parts such that the sum of their reciprocals is $\frac{2}{15}$
What is the smaller number of the two?

(1) 8 (2) 12 (3) 10 (4) 15

Q. 8. The ratio of the exterior angle and the interior angle of a regular polygon is 2 : 7
By how much is the interior angle greater than the exterior angle of this polygon?

(1) 140^o (2) 70^o (3) 60^o (4) 100^o

Q. 9. Given that $x + \frac{3-x}{3} = 1 + \frac{x-2}{2}$. Find the value of y if $\frac{3}{x} + \frac{1}{y} = \frac{3}{2}$

(1) $\frac{1}{2}$ (2) $\frac{3}{2}$ (3) $\frac{1}{4}$ (4) $-\frac{3}{2}$

Q. 10. The H.C.F of ♠♠6 and 343 is 7 and the digits at the ♠ place are the same. Find the digit in the ♠ place.

(1) 7 (2) 3 (3) 6 (4) 4

Q. 11. What is the diference between the greatest and the smallest fractions of these fractions:
$\frac{3}{4}$, $\frac{2}{3}$, $\frac{5}{6}$, $\frac{4}{5}$ (1) $\frac{1}{30}$ (2) $\frac{2}{15}$ (3) $\frac{1}{6}$ (4) $\frac{1}{12}$

Q. 12. Evaluate : $\frac{8.6 \times 3.5}{2.4 \times 0.07} \div \frac{1}{3.6 \times 1.29}$

(1) 1000 (2) 450 (3) 600 (4) 500

Q. 13. The simple interest on a certain principal for 2 years is Rs.1200 and the compound interest is Rs.1290. What could be the principal amount of the following?
(1) Rs.8000 (2) Rs.12000 (3) Rs.4000 (4) Rs.6000

Q. 14. The area of a rhombus is 336 sq.cm. and one of its diagonal is 14 cm. Find the perimeter of the rhombus.
(1) 84 cm (2) 56 cm (3) 96 cm (4) 100 cm

Q. 15. Simplify : $5\,a^2\,b^3 \times 3\,a^3\,b^2 \div 6\,a^5\,b^6$
(1) $\frac{5}{ab}$ (2) $\frac{5}{2b}$ (3) $\frac{3}{b}$ (4) $\frac{5a}{2b}$

Q. 16. The angles of a triangle are : (x + 15) , (3x – 75) and (150 – 2x). Which of the following is true about this triangle?
(1) The triangle is Right angled (2) The triangle is Isosceles
(3) The triangle is Equilateral (4) The triangle is Right angled Isosceles

Q. 17. If $x + \frac{1}{x} = 3$ then $x^2 + \frac{1}{x^2} = ?$ (1) 3 (2) 9
(3) 6 (4) 7

Q. 18. In a group of people, the oldest and the youngest have an age difference of 100 years. If these two are left out of counting, then the average age of the remaining 40 people is 28. The average age of the entire group being 30, how old is the eldest person?
(1) 101 years (2) 140 years (3) 120 years (4) 103 years

Q. 19. When Mrs. Joshi divided the surface area of a sphere by the sphere`s volume, she got the answer as $\frac{1}{18}$ cm. What could be the radius of the sphere?
(1) 54 cm (2) 6 cm (3) 45 cm (4) 36 cm

Q. 20. By selleing an article at 80% of its marked price, a merchant makes a loss of 12%. What profit or loss % will the merchant make if the article is sold at 95% of its marked price?
(1) 5% profit (2) 4.5% profit (3) 1% loss (4) 10% loss

Q. 21. What should be added to $1\frac{3}{5}$ to get $3\frac{2}{7}$?
(1) $1\frac{8}{35}$ (2) $3\frac{5}{7}$ (3) $8\frac{1}{35}$ (4) $1\frac{24}{35}$

Q. 22. Twelve men can dig a well in 8 days. After 3 days of work, the contractor asks 3 more men to join to dig the well. In how many days was the work completed?
(1) 6 (2) 7 (3) 5 (4) 4

Q. 23. Which of the following is the smallest: $\sqrt[4]{16}$, $\sqrt[5]{32}$, $\sqrt[3]{8}$, $\sqrt{3}$
(1) $\sqrt{3}$ (2) $\sqrt[3]{8}$ (3) $\sqrt[5]{32}$ (4) $\sqrt[4]{16}$

Q. 24. The L.C.M of two numbers is 225 and their H.C.F is 5. If one of the numbers is 25, then the other is?
(1) 75 (2) 65 (3) 45 (4) 15

Q. 25. In the India-Australia one day match, due to rain, India needed 324 runs in 48 overs to win. In the first 10 overs, the average scoring rate was 6, in the next 10 overs it increased to 8.5. It then declined to 5.5 in the next 10 overs and again rose to 7 in next 10 overs. To win the match what average is needed?
(1) 8.25 (2) 6.75 (3) 7.75 (4) 7

Q. 26. In a library, the ratio of number of Mathematics books to that of Science books was 4:3 and total number of Mathematics books was 1248. When some more Mathematics books were bought, the ratio became 5:3. Find the number of Mathematics books bought.
(1) 312 (2) 321 (3) 936 (4) 1560

Q. 27. Alok invested a certain sum of money in a simple interest bond whose value grew to Rs.300 at the end of 3 years and to Rs.400 at the end of another 5 years. Find the rate of interest?
(1) 12% (2) 6.25% (3) 8.33% (4) 20%

Q. 28. The price of cooking oil has increased by 25%. By what percent should a family reduce the consumption of cooking oil so as not to increase the expenditure on cooking oil?
(1) 16% (2) 18% (3) 25% (4) 20%

Q. 29. A train travelling at 72 km/hr crosses a platform in 30 seconds and a man standing on the platform in 18 seconds. What is the length of the platform in meters?
(1) 360 meters (2) 240 meters (3) 420 meters (4) 600 meters

Q. 30. The two equal sides of an isosceles triangle are (3x + 1) cm and (4x –2) cm, and the third side is (2x – 1) cm. What is the perimeter of this triangle?
(1) 36 cm (2) 28 cm (3) 25 cm (4) cannot be derermined

Q. 31. Find the rate of interest when Rs.800 becomes Rs.882 in two years at C.I .
(1) 5% (2) 8% (3) 4% (4) 6%

Q. 32. Akhil started a business investing Rs.12000. Nikhil joined him after 4 months by investing Rs.18000. What would be the share of Nikhil in the profit of Rs.9500 at the end of the year?
(1) Rs.5700 (2) Rs.4750 (3) Rs.3800 (4) Rs.6250

Q. 33. Two books are sold for Rs.500 each. The dealer makes a profit of 25% on one and loses 25% on the other. Find the dealers profit or loss on the whole.
(1) No profit no loss (2) 5% loss (3) 6.25% profit (4) 6.25% loss

Q. 34. The hypotenuse of a right angled triangle is 25 cm, and the diference between the other two sides is 5 cm. To find the measure of these two sides, which of the following equation would you use?
(1) $x^2 - 5x - 300 = 0$ (2) $x^2 - 5x + 300 = 0$
(3) $x^2 + 5x - 600 = 0$ (4) $x^2 - 10x - 300 = 0$

Q. 35. The square root of the smallest 4-digit square number is:
(1) 100 (2) 30 (3) 32 (4) 40

Q. 36. The sum measure of all the angles of 24 sided regular polygon is :
(1) 24 rt.angles (2) 44 rt.angles (3) 48 rt.angles (4) 36 rt.angles

Q. 37. What should be added to $a^2 + 6ab$ to make it a perfect square?
(1) $3b^2$ (2) $6b^2$ (3) b^2 (4) $9b^2$

Q. 38. In a college 55% students are girls. 80% of the boys like Mathematics. What percentage of girls like Mathematics, if overall 58% of the students like Mathematics?
(1) 40% (2) 55% (3) 45% (4) 22%

Q. 39. A solid metal ball whose diameter is 6 cm is melted and made into a solid cylinder. If the diameter of the cylinder is the same as the ball, what would be its height?
(1) 8 cm (2) 6 cm (3) 4 cm (4) 6.5 cm

Q. 40. A motorist covered a distance of 340 km between city A and city B in 5 hours. If part of the distance is covered at a speed of 60 km/hr and the remaining at 80 km/hr, how many hours did the motorist travel at 60 km/hr?
(1) 2 hours (2) 2 hr 30 min (3) 3 hr 30 min (4) 3 hours