Quant Mega Quiz for SSC Tier-1

Q1. The ratio of two numbers is 5 : 11. If both numbers are increased by 10, the ratio becomes 7 : 13. What is the sum of the two numbers?
(a) 80
(b) 32
(c) 48
(d) 160

Q2. The total surface area of a hemisphere is 462 cm². Find its diameter (in cm).
(a) 7
(b) 2 8
(c) 21
(d) 14

Q3. Selling price of an article is Rs 2397 and discount offered is 15%. What is the marked price (in Rs)?
(a) 2756.5
(b) 2856.6
(c) 2740
(d) 2820

Q4.
If $3\sqrt{2} + \sqrt{18} + \sqrt{50} = 15.55$, then what is the value of $\sqrt{32} + \sqrt{72}$?
(a) 13.22
(b) 10.83
(c) 14.13
(d) 16.54

Q5. What is the value of $(\sin60° – 2/\sqrt{3})$?
(a) $–1/2\sqrt{3}$
(b) $–1/2$
(c) $1/\sqrt{3}$
(d) $(1–2\sqrt{3})/2$

Q6. If 3P = 5Q = 15R, then what is P : Q : R?
(a) 5 : 3 : 4
(b) 5 : 3 : 1
(c) 3 : 5 : 15
(d) 15 : 5 : 3

Q7. If Rima has 4 more coins than Lima, Lima has 1 more coin than Bani and Bani has 1 more coin than Hina. Finally Hina has 4 more coins than Amy. Then minimum number of coins that must be transferred if all of them wish to have an equal number of coins:
(a) 5
(b) 6
(c) 7
(d) none of these

Q8. Which one among $\sqrt{10} + \sqrt{4}$, $\sqrt{11} + \sqrt{3}$, $\sqrt{7} + \sqrt{7}$ is the smallest number?
(a) $\sqrt{10} + \sqrt{4}$
(b) $\sqrt{11} + \sqrt{3}$
(c) $\sqrt{7} + \sqrt{7}$
(d) All are equal

Q9. What is the smallest value that must be added to 709, so that the resultant is a perfect square?
(a) 8
(b) 12
(c) 20
(d) 32

Q10. A milk man purchases the milk at Rs 20/liter and sells it at Rs 22/ liter. He mixes 2 liters of water with every 8 liters of pure milk. What is his percent profit?
(a) 37.5%
(b) 35%
(c) 25%
(d) 32.75%

Q11. What is the area of the triangle formed by the Points (–5, 7), (4, –1) and (4, –1)?
(a) 255
(b) 362
(c) 162
(d) None of these

Q12. Find the remainder when f (x) = 27x³ – 45x² + 9x + 12 is divided by g(x) = x – ⅓
(a) 3
(b) 11
(c) –12
(d) 14

Q13. B and C are equally efficient, but the efficiency of A is half of each B and C. A and B started a work and 3 days later C joined them. If A alone can do the work in 14 days, then in how many more days the work will be completed?
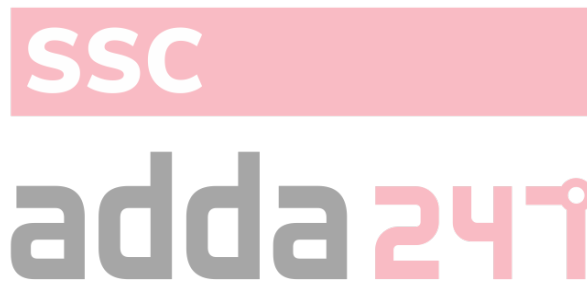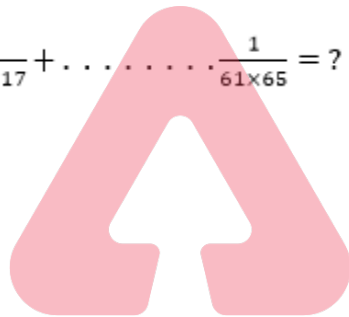
(a) 1

(b) 2

(c) 3

(d) 4.5

Q14. The traffic lights at three different road crossings change after 24 s, 36 s and 54 s, respectively. If they all change simultaneously at 10 : 15 : 00 am, then at what time will they again change simultaneously?

(a) 10 : 16 : 54 am

(b) 10 : 18 : 36 am

(c) 10 : 17 : 02 am

(d) 10 : 22 : 12 am

Q15.

$$\frac{1}{5\times9} + \frac{1}{9\times13} + \frac{1}{13\times17} + \ldots\ldots\ldots\frac{1}{61\times65} = ?$$

(a) 4/45

(b) 3/65

(c) 2/35

(d) 3/35

Q16. Find the value of $5.\overline{12} + 3.\overline{21} + 4.\overline{31} = ?$

(a) $12\frac{64}{99}$

(b) $12\frac{74}{99}$

(c) $12\frac{77}{99}$

(d) $12\frac{84}{99}$

Q17. Rohit invested some amount at the rate of 6% p. a. and at the end of 3 years he got Rs. 8730 simple interest. How much compound interest he will get on same amount and same rate of interest after 2 years.

(a) Rs. 5820

(b) Rs. 5949.60

(c) Rs. 5900

(d) Rs. 5994.60

Q18. The difference between compound interest and simple interest at the same rate Rs. 5000 for 2 years is Rs. 72. The rate of interest per annum is
(a) 6%
(b) 8%
(c) 10%
(d) 12%

Q19. In a group of buffaloes and ducks, the number of legs are 24 more than twice the number of heads. What is the number of buffaloes in the group?
(a) 6
(b) 8
(c) 10
(d) 12

Q20. If a and b are positive integers, such that $a^b = 125$, then $(a - b)^{a+b-4} = ?$
(a) 16
(b) 25
(c) 28
(d) 30

Q21. A man spends $28\frac{4}{7}\%$ on food, $16\frac{2}{3}\%$ of the remaining on house rent and 50% of the remaining on travelling. If he is left with 2500 Rs. Then find how much money was with him?
(a) 8700 Rs.
(b) 8400 Rs.
(c) 8500 Rs.
(d) 8100 Rs.

Q22. In a national survey, voter of national party A in 2011 is 2.5 lakh. In 2012 the voter of National Party A increases by 60%. If in 2012 the voters of National Party B is $87\frac{4}{8}\%$ of voter of National Party A and there is an increase of 40% in the voters of National Party B from the year 2011. Then find the number of voters of National Party B in 2011?
(a) 1.75 lakh
(b) 2.5 lakh
(c) 3 lakh
(d) 2.75 lakh

Q23. In a class test 68% passed in a class test. Out of these (passed in class test) only 85% passed in half yearly test. Out of those who did not passed in class test, 81% passed in half yearly exam. Find the percentage of students passed in half yearly exam?
(a) 82.17%
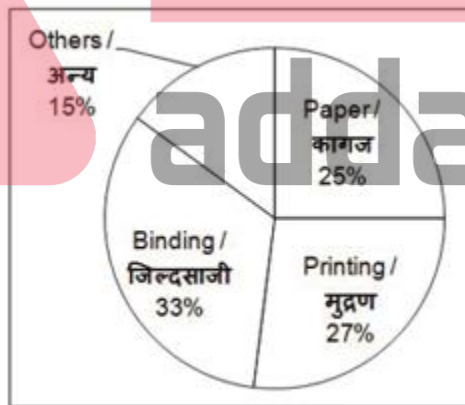(b) 83.91%
(c) 83.72%
(d) 85%

Q24. Income of A is $128\frac{4}{7}\%$ of income of B and income of C is 120% of income of A. If the total income of all the three is 80400, then find the sum of income of A and B?
(a) 48000
(b) 58000
(c) 52000
(d) None of these

Q25. In CSAT examination there are 4 subject each containing 25 questions. If a student answered 80% of Mathematics, 60% of Reasoning, 72% of General awareness and 76% of English problems correctly. She did not passed as she got less than 75% of the problems correct. How much more questions should she answer correctly to earn 75% passing grade (considering there is no negative marking)?
(a) 3
(b) 4
(c) 5
(d) 6

Directions (26-30): The given pie chart shows the expenditure (in degrees) incurred in making a book.

Q26. If the total expenditure is Rs 60000, then what is the expenditure (in Rs) on the Printing?
(a) 18400
(b) 14800
(c) 13400
(d) 16200

Q27. What is the central angle (in degrees) of the sector made by the expenditure on Paper?
(a) 25
(b) 75
(c) 90
(d) 120

Q28. The expenditure on Binding is how much percent more than the expenditure on Paper?
(a) 32
(b) 24.24
(c) 28.18
(d) 34

Q29. If expenditure on Paper is Rs 20000, then what is the expenditure (in Rs) on Binding?
(a) 24600
(b) 26400
(c) 28000
(d) 22800

Q30. In Others there are only two types of expenditures viz. Marketing and Distribution in ratio 3 : 2 respectively. What will be the central angle (in degrees) made by the sector of expenditure on Marketing?
(a) 21.6
(b) 32.4
(c) 27
(d) 36