

Quant Mega Quiz for SSC Tier - 1

Q1. What is the remainder obtained on dividing  $34^{43} + 43^{34}$  by 7?

- (a) 4
- (b) 3
- (c) 1
- (d) 0

Q2. Two different prime numbers X and Y, both are greater than 2, then which of the following must be true?

- (a)  $X - Y = 23$
- (b)  $X + Y \neq 87$
- (c) Both (a) and (b)
- (d) None of these

Q3. What is the remainder when  $1! + 2! + 3! + \dots + 100!$  is divided by 7?

- (a) 0
- (b) 5
- (c) 6
- (d) 3

Q4. On dividing 2272 as well as 875 by 3-digit number N, we get the same remainder. The sum of the digits of N is:

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

Q5. Which one of the following numbers will completely divide  $(3^{25} + 3^{26} + 3^{27} + 3^{28})$ ?

- (a) 11
- (b) 16
- (c) 25
- (d) 30



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**Q6.** There are two integers 34041 and 32506, when divided by a three-digit integer  $n$ , leave the same remainder. What is the value of  $n$ ?

- (a) 298
- (b) 307
- (c) 461
- (d) Can't be determined

**Q7.** The LCM of two numbers is 40 times their HCF. The sum of the LCM and HCF is 1,476. If one of the numbers is 288, find the other numbers?

- (a) 169
- (b) 180
- (c) 240
- (d) 260

**Q8.** Find the remainder when  $7^{99}$  is divided by 2400.

- (a) 1
- (b) 343
- (c) 49
- (d) 7

**Q9.** In a problem involving division, the divisor is eight times the quotient and four times the remainder. If the remainder is 12, then the dividend is ?

- (a) 300
- (b) 288
- (c) 512
- (d) 524

**Q10.**

The simplified value of

$$\left(1 - \frac{1}{3}\right) \left(1 - \frac{1}{4}\right) \left(1 - \frac{1}{5}\right) \dots \left(1 - \frac{1}{99}\right) \left(1 - \frac{1}{100}\right) ?$$

- (a)  $\frac{2}{99}$
- (b)  $\frac{1}{25}$
- (c)  $\frac{1}{50}$
- (d)  $\frac{1}{100}$

**Q11.** Arun lends Rs. 20,000 to two of his friends. He gives Rs. 12,000 to the first at 8% p.a. simple interest. Arun wants to make a profit of 10% on the whole. The simple interest rate at which he should lend the remaining sum of money to the second friend is

- (a) 8%
- (b) 16%
- (c) 12%
- (d) 13%

**Q12.** An amount of money at compound interest grows up to Rs. 3,840 in 4 years and up to Rs. 3,936 in 5 years. Find the rate of interest.

- (a) 2.5%
- (b) 2%
- (c) 3.5%
- (d) 2.05%

**Q13.** A sum of money at compound interest amounts to thrice itself in 3 years. In how many years will it be 9 times itself ?

- (a) 9
- (b) 27
- (c) 6
- (d) 3

**Q14.** Sita deposited Rs. 5,000 at 10% simple interest for 2 years, How much more money will Sita have in her account at the end of two years, if it is compounded semi-annually.

- (a) Rs. 50
- (b) Rs. 40
- (c) Rs. 77.50
- (d) Rs. 85.50



**Q15.** A person deposited Rs. 500 for 4 years and Rs. 600 for 3 years at the same rate of simple interest in a bank. Altogether he received Rs. 190 as interest. The rate of simple interest per annum was

- (a) 4%
- (b) 5%
- (c) 2%
- (d) 3%

**Q16.** A borrows Rs. 800 at the rate of 12% per annum simple interest and B borrows Rs. 910 at the rate of 10% per annum, simple interest. In how many years will their amounts of debt be equal?

- (a) 18
- (b) 20
- (c) 22
- (d) 24

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**Q17.** The simple interest on a sum of money is  $\frac{1}{16}$  of the sum. If the number of years is numerically equal to the rate percent per annum, then the rate percent per annum is

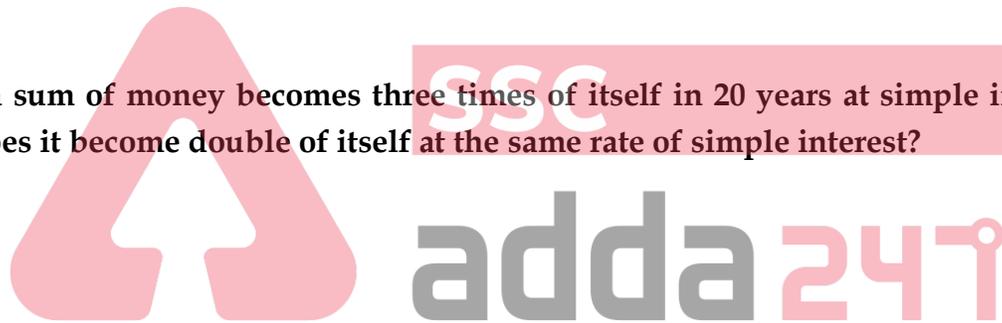
- (a)  $3\frac{1}{3}\%$
- (b)  $6\frac{2}{3}\%$
- (c)  $2\frac{1}{2}\%$
- (d)  $7\frac{1}{2}\%$

**Q18.** Nitin borrowed some money at the rate of 6% p.a. for the first three years, 9% p.a. for the next five years and 13% p.a. for the period beyond eight years. If the total interest paid by him at the end of eleven years is Rs. 8,160, the money borrowed by him (in Rs.) was:

- (a) Rs. 12000
- (b) Rs. 6000
- (c) Rs. 8000
- (d) Rs. 10000

**Q19.** A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate of simple interest?

- (a) 8 years
- (b) 10 years
- (c) 12 years
- (d) 14 years



**Q20.** Rs. 12,000 is divided into two parts so that the simple interest on the first part for 3 years at 12% per annum may be equal to the simple interest on the second part for 4  $\frac{1}{2}$  years at 16% per annum. The ratio of the first part to the second part is

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

**Q21.** A and B together can do a piece of work in 12 days which B and C together can do in 16 days. After A has been working at it for 5 days, and B for 7 days, C takes up and finishes it alone in 13 days. In how many days could each do the work by himself?

- (a) 8, 16, 24
- (b) 16, 24, 48
- (c) 16, 48, 24
- (d) 8, 24, 48

**Q22.** A pump can be operated both for filling a tank and for emptying it. The capacity of tank is  $2400 \text{ m}^3$ . The emptying capacity of the pump is  $10 \text{ m}^3$  per minute higher than its filling capacity. Consequently, the pump needs 8 minutes less to empty the tank to fill it. Find the filling capacity of pump.

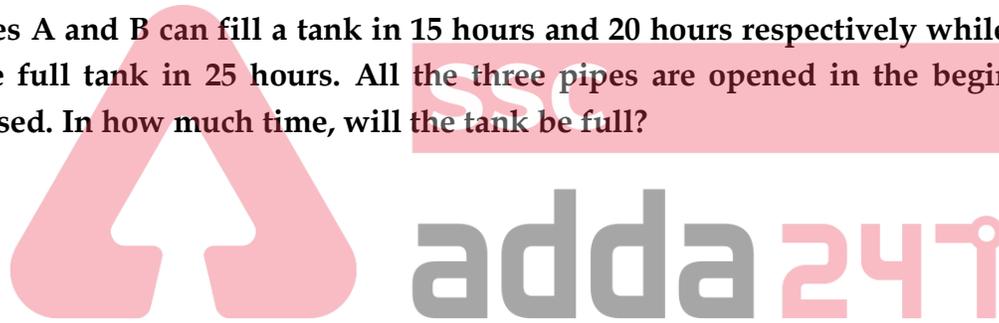
- (a)  $50 \text{ m}^3/\text{min}$
- (b)  $60 \text{ m}^3/\text{min}$
- (c)  $58 \text{ m}^3/\text{min}$
- (d) None of these

**Q23.** A tank is filled in 5 hours by three pipes A, B and C. The pipe C is twice as fast as B and B is twice as fast as A. How much time will pipe A alone take to fill the tank?

- (a) 20 hrs
- (b) 25 hrs
- (c) 35 hrs
- (d) Cannot be determined

**Q24.** Two pipes A and B can fill a tank in 15 hours and 20 hours respectively while a third pipe C can empty the full tank in 25 hours. All the three pipes are opened in the beginning. After 10 hours, C is closed. In how much time, will the tank be full?

- (a) 12 hrs
- (b) 13 hrs
- (c) 16 hrs
- (d) 18 hrs



**Q25.** Two taps can fill a tank in 12 minutes and 18 minutes, respectively. Both the taps are kept open for 2 minutes and then the tap that fills the tank in 12 minutes is turned off. In how many more minutes will the tank be filled?

- (a) 9
- (b) 10
- (c) 12
- (d) 13

**Q26.** A contract is to be completed in 46 days and 117 men were set to work, each working 8 hours a day. After 33 days,  $\frac{4}{7}$  of the work is completed. How many additional men may be employed so that the work may be completed in time, each man now working 9 hours a day?

- (a) 80
- (b) 81
- (c) 82
- (d) 83

**Q27.** The Bubna dam has four inlets. Through the first three inlets, the dam can be filled in 12 minutes; through the second, the third and the fourth inlet, it can be filled in 15 minutes; and through the first and the fourth inlet, in 20 minutes. How much time will it take all the four inlets to fill up the dam?

- (a) 8 min
- (b) 10 min
- (c) 12 min
- (d) None of these

**Q28.** Two pipes can fill a cistern in 14 and 16 hours respectively. The pipes are opened simultaneously, and it is found that due to leakage in the bottom of the cistern, it takes 32 minutes extra for the cistern to be filled up. When the cistern is full, in what time will the leak empty it?

- (a) 114 h
- (b) 112 h
- (c) 100 h
- (d) 80 h

**Q29.** The work done by 4 men in 12 days is equal to the work done by 6 women in 10 days and is also equal to the work done by 8 children in 9 days. A man, a woman and a child working together take 10 days to complete a particular job. In how many days will the same job be completed by 2 women and 5 children working together?

- (a) 5
- (b) 6
- (c) 4
- (d) 7

**Q30.** 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



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