1. The number of prime factors in $6^{333} \times 7^{222} \times 8^{111}$ is **(SSC (10+2) 2013)**

(a) 1111 (b) 1211
(c) 1221 (d) 1222

2. The smallest positive prime (say p) such that $2^p - 1$ is not a prime, is **[CDS 2013]**

(a) 5 **(b) 11**
(c) 17 (d) 29

3. The total number of prime factors in $(25)^{10} \times (24)^{20} \times (26)^{25}$ is **(SSC (10+2) 2013)**

(a) 1000 (b) 120
(c) 150 (d) 140

4. If $1^2 + 2^2 + \ldots + x^2 = \frac{x(x+1)(2x+1)}{6}$, then $1^2 + 3^2 + 5^2 + \ldots + 19^2$ is equal to

(a) 1330 (b) 2100
(c) 2485 (d) 2470

5. The maximum integral value of *n* for which $\frac{n^2+n+6}{n}$ is an integer, is **[SSC Constable 2012]**

(a) 3 (b) 2
(c) 6 **(d) 8**

6. $3^{11} + 3^{12} + 3^{13} + 3^{14}$ is divisible by.....

[SSC CPO 2017]

(a) 7 **(b) 8**
(c) 11 (d) 14

7. A number when divided by 72, leaves remainder 10. What will be the remainder when the same number is divided by 9? **[SSC MTS 2016]**

(a) 1 (b) 2
(c) 3 (d) 4

8. A 4-digit number 1xy7 is divisible by 11. What is the value of x - y? **[RRB ALP 2018]**

(a) – 2 (b) – 8
(c) – 6 (d) – 4

9. A number consists of two digits whose sum is 10. If the digits of the number are reversed, then the number decreased by 36. Which of the following is/are correct?
I. The number is divisible by a composite number.
II. The number is a prime number.
Select the correct answer using the code given below.

(a) Only I **(b) Only II**
(c) Both I and II (d) Neither I nor II

10. When 335 is added to 5 A7, the result is 8 B2. 8B2 is divisible by 3. What is the largest possible value of A? **[SSC CGL 2013]**

(a) 8 (b) 2
(c) 1 **(d) 4**

11. Find the sum of $\left(1-\frac{1}{n+1}\right)+\left(1-\frac{2}{n+1}\right)+\left(1-\frac{3}{n+1}\right)+\cdots+\left(1-\frac{n}{n+1}\right)$ **[SSC CGL 2013]**

(a) n **(b) ½ n**
(c) (n+1) (d) ½ (n+1)

12. The sum of two digits of a number is 10. If the digits are interchanged, then its value increased by 18. Find the number. **[RRB NTPC 2016]**

(a) 46 (b) 64
(c) 19 (d) 28

13. If two numbers x2xy1x and 7y683y is divisible by 11, then find the value of x.

(a) 3 (b) 2
(c) 4 **(d) 5**

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14. The difference between a number of two-digits and the number obtained by interchanging its digits, 63. What is the difference between its digits? **[MP Patwari 2017]**

(a) 5 (b) 6
(c) 7 (d) 8

15. The sum of the digits of a two-digit number is 10. When the digits are reversed, the number decreases by 54. Find the changed number. **[RRB NTPC 2016]**

(a) 73 **(b) 28**
(c) 82 (d) 37

16. A number x when divided by 289, leaves 18 as the remainder. The same number when divided by 17 leaves y as a remainder. The value of y is **[SSC CGL 2013]**

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

17. The two-digit number, which when divided by sum of the digits and product of the digits respectively, the remainder is same and the difference of quotients is one, **is**
(CDS 2013)

(a) 14 (b) 23
(c) 32 (d) 41

18. 0.4 of a number equals 0.75 of another. On adding these two numbers, the sum 690 is obtained. The greater of these two numbers is **[KVS LDC 2017]**

(a) 425 (b) 400
(c) 450 (d) 475

19. A number has two digits. If a number obtained by interchanging the digits is added to original number, then the number thus formed will be exactly divisible by the number **[SSC CGL 2008]**

(a) 330 (b) 345
(c) 355 (d) 360

20. If $1^2 + 2^2 + 3^2 + \ldots + n^2 = \frac{n(n+1)(2n+1)}{6}$, Find the value of $5^2 + 6^2 + 7^2 + \ldots + 10^2$. **[WBCS Pre 2019]**

(a) 330 (b) 345
(c) 355 (d) 360

21. 30744 is divided by which one-digit number? **[SSC CPO 2019]**

(a) Except 5 and 7, all others
(b) Only 2, 3 and 6
(c) Only 2, 3, 6 and 9
(d) Except 5 all others

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