NUMBER SYSTEM

1. Which of the following number is a prime number?
(a) 541 (b) 323 (c) 217 (d) 551

2. Which is the least 7-digit number, that leaves a remainder of 3 when divided by 7?
(a) 1000003 (b) 1000010 (c) 1000005 (d) 1000002

3. When a certain number is multiplied by 21, the product consists of only fours. The smallest such number is:
(a) 21164 (b) 21174 (c) 21264 (d) 22264

4. A number when divided by 627 leaves a remainder 43. By dividing the same number by 19, the remainder will be:
(a) 19 (b) 5 (c) 13 (d) cannot be determined

5. The sum of all odd numbers from 1 to 51 is:
(a) 484 (b) 576 (c) 338 (d) 676

6. The digit in the unit place in $(1038)^{71}$ is:
(a) 2 (b) 4 (c) 8 (d) 6

7. The number of prime numbers in $(49)^{21} \times (6)^{6} \times (8)^{4}$ is:
(a) 31 (b) 56 (c) 66 (d) 39

8. The number of zeros at the end of the product:
$(16 \times 22 \times 15 \times 50 \times 65 \times 115 \times 18 \times 90)$ is
(a) 5 (b) 6 (c) 12 (d) 7

9. How many such numbers are there between 1 and 100 such that each of which is not only divisible by 4, but also has one digits as 4 in the number?
(a) 12 (b) 7 (c) 15 (d) 17

10. $4^{61} + 4^{62} + 4^{63} + 4^{64}$ is divisible by:
(a) 3 (b) 11 (c) 12 (d) 10

11. Which digit should come in place of * to form the number 378*95 is completely divisible by 11?
(a) 1 (b) 9 (c) 5 (d) 8

12. The digit in the unit's place of the number
$28^{999} + 12^{289} - 21^{467}$ is:
(a) 7 (b) 3 (c) 1 (d) 5

13. $(7^{19} - 1)$ is completely divisible by:
(a) 6 (b) 7 (c) 16 (d) 14

14. What is the smallest number that must be multiplied with 192 to make it a four digit perfect square?
(a) 3 (b) 12 (c) 18 (d) 6

15. What is the sum of the least and the highest four digit numbers which are exactly divisible by 13?
(a) 10999 (b) 11320 (c) 10689 (d) 10998

16.Which of the following number is divisible by 99?
(a) 212985 (b) 211085 (c) 229185 (d) 221985

17. $(17^{21} + 19^{21})$ is not divisible by:
(a) 36 (b) 8 (c)18 (d) 9

18. How many prime numbers are there between 80 and 105?
(a) 3 (b) 4 (c) 8 (d) 5

19. The difference between the squares of two consecutive number is 35. The numbers are:
(a) 14,15 (b) 15,16 (c) 17,18 (d) 18,19

20. The difference between two numbers is 11 and 1/5th of their sum is 9. The numbers are:
(a) 31,20 (b) 30,19 (c) 29,18 (d) 28,17

21. The difference between squares of two numbers is 144000 and the sum of the numbers is 1000. The numbers are:
(a) 592,408 (b) 572,428 (c) 750, 250 (d) 100, 900

22. The sum of the squares of three consecutive even numbers is 200. The sum of the numbers is:
(a) 15 (b) 14 (c) 16 (d) 24

23. 126 has been divided into three parts, such that of the first part, half of the second part and one-third of the third part are equal. The largest part is:
(a) 36 (b) 65 (c) 63 (d) 37

24. 101+102+103+…….200 = ?
(a) 15050 (b) 15500 (c) 10505 (d) 10550

25. The sum of how many terms of the series 6+12+18+24+30+…….. is 1800?
(a) 16 (b) 24 (c) 20 (d) 18

26. $(11^2 + 12^2 + 13^2 + \cdots .. 20^2)$= ?
(a) 385 (b) 2485 (c) 2870 (d) 3255

27. $\left(1 - \frac{1}{n}\right) + \left(1 - \frac{2}{n}\right) + \left(1 - \frac{3}{n}\right) + \cdots$ Upto n terms=?
(a) $\frac{1}{2}\, n$ (b) $\frac{1}{2}(n-1)$ (c) $\frac{1}{2}\, n\,(n-1)$ (d) None of these

28. A number when divided successively by 4 and 5 leaves remainder 1 and 4 respectively. When it is successively divided by 5 and 4 the remainders will be:

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

29. It is being given that $(2^{32}+1)$ is completely divisible by a whole number. Which of the following numbers is completely divisible by this number:

(a) $(2^{16}+1)$ (b) $(2^{16}-1)$ (c) $(2^{96}+1)$ (d) $7x2^{33}$

30. $2+2^2+2^3+\ldots..+2^9=?$

(a) 2044 (b) 1022 (c) 1056 (d) None of these

31. How many terms are there in the G.P. 3,6,12,24……..384?

(a) 8 (b) 9 (c) 10 (d) 11

32. On dividing 2272 as well as 875 by a 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

33. $9\frac{3}{4} + 7\frac{2}{17} - 9\frac{1}{15} = ?$

(a) $7\frac{719}{1020}$ (b) $9\frac{817}{1020}$ (c) $9\frac{719}{1020}$ (d) $7\frac{817}{1020}$

34. $(12)^3 \times 6^4 \div 432 = ?$

(a) 5184 (b) 5060 (c) 5148 (d) 5084

35. $35 + 15 \times 1.5 = ?$

(a) 75 (b) 51.5 (c) 57.5 (d) 5.25

36. A person was to multiply a fraction by 6/7. Instead, he divided and got an answer which exceeds the correct answer by 1/7. The correct answer was:

(a) 6/13 (b) 91/36 (c) 36/91 (d) 13/6

37. The digit in the unit's place in the cube root of 21952 is :

(a) 8 (b) 6 (c) 4 (d) 2

38. A number consists of two digits whose sum is 7. If the digits are reversed, then number is increased by 27. The number is:

(a) 52 (b) 16 (c) 25 (d)34

39. Calculate apprpox value of ?

$$95.975^{3.5} \div 16.001^{3.5} \times 6.002^{1.5} \div 35.99^2$$

(a) 36 (b) 96 (c) $6\sqrt{6}$ (d) 6

40. $a^2 + b^2 = 45$, and ab= 18 than find the value of $\frac{1}{a} + \frac{1}{b}$:

(a) $\frac{2}{3}$ (b) $\frac{1}{2}$ (c)) $\frac{1}{6}$ (d)) $\frac{5}{6}$