IEM KOLKATA

Number System

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Q1) The difference between a two-digit number and the number obtained by interchanging the positions of its digits is 36. What is the difference between the two digits of that number?
(a) 3 (b) 4 (c) 9 (d) Cannot be determined

Q2) A two-digit number is such that the product of the digits is 8. When 18 is added to the number, then the digits are reversed. The number is:
(a) 18 (b) 24 (c) 42 (d) 81

Q3) $2^{25} + 2^{26} + 2^{27}$ is divisible by
(a) 6 (b) 7 (c) 5 (d) 9

Q4) $32^5 + 2^{27}$ is divisible by
(a) 3 (b) 7 (c) 10 (d) 11

Q5) Find the smallest number which when added to 4519 makes it exactly divisible by 30.
(a) 6 (b) 11 (c) 10 (d) 13

Q6) Find the smallest number which on adding 19 to it is exactly divisible by 28, 36 and 45.
(a) 1260 (b) 1241 (c) 1620 (d) 1214

Q7) How many numbers are there between 1 & 900 which are not divisible by 2, 3 or 5?
(a) 240 (b) 245 (c) 250 (d) None

Q8) How many numbers upto 8700 are divisible by both 3 & 7?
(a) 39 (b) 41 (c) 42 (d) 46

Q9) When 2^{256} is divided by 17, the remainder would be:
(a) 2 (b) 0 (c) 5 (d) 1

Q10) What is the remainder when $(17^{25} + 19^{25})$ is divided by 18?
(a) 0 (b) 1 (c) 3 (d) 9

Q11) What is the remainder when we divide $2^{1000000}$ by 7.
(a) 1 (b) 2 (c) 4 (d) 6

Q12) Find the remainder when 989^{129} is divided by 33.
(a) 30 (b) 28 (c) 24 (d) 32

Q13) Find remainder when $(17^{13} - 21)$ is divided by 18.
(a) 15 (b) 17 (c) 14 (d) 21

Q14) Find the greatest number which when divides 131, 91 & 215 leaves remainders 8, 9 & 10 respectively.
(a) 41 (b) 57 (c) 37 (d) 61

Q15) What will be the remainder when $27^{27} + 27$ is divisible by 28.