Aptitude Number System Problems with Solutions Pdf

Question: 1

The smallest 4 digit number exactly divisible by 7 is

(A) 1001

(B) 1007

(C) 1101

(D) 1108

Ans: A

The smallest 4 digit number is 1000.

This when divided by leaves 6 as remainder.

∴ 1001 is the smallest 4 digit number exactly divisible by 7.

Question: 2

Which is not a prime number?

(A) 13

(B) 19

(C) 17

(D) 21

Ans: D

21 = 3 x 7 is not a prime number because 21 is a composite number.

Question: 3

– 95 ÷ 19 = ?

(A) – 4

(B) – 5

(D) 5

Ans: B

-95 ÷ 19 =

$\frac{-95}{19}$

= -5.

Question: 4

$(65)^2 - (55)^2 = ?$

(A) 120

(B) 1200

(C) 1400

(D) 2100

Ans: B

$(65)^2 - (55)^2 = (65 + 55)(65 - 55) = (120 \times 10) = 1200.$

Question: 5

The digit in the unit's place of the number$(67)^{25} - 1$ must be

(B) 6

(C) 8

(D) 10

Ans: B

Unit digit of $(67)^{25}$ = Unit digit of 7^{25}.

Unit digit of 7^4 is 1 and so the unit digit of $(7^4)^6$ is 1.

∴ Unit digit of $7^{25} = (1 \times 7) = 7$.

Question: 6

If m and n are integers, divisible by 5, which one of the following is not necessary true?

(A) m – n is divisible by 5

(B) m + n is divisible by 10

(C) $m^2 - n^2$ is divisible by 25

(D) none of these

Ans: B

Take m = 15 and n = 20. Then, each one of m and n is divisible by 5. But (m + n) is not divisible by 10.

Hence, (m + n) is divisible by 10 is not true.

Question: 7

The largest number that exactly divides each number of the sequence $1^5 - 1, 2^5 - 2, 3^5 - 3, \ldots..,n^5 - n, \ldots.$ Is

(A) 1

(B) 15

(C) 30

(D) 120

Ans: C

Required number = $(2^5 - 2) = (32 – 2) = 30$.

Question: 8

The total numbers of integers between 200 and 400, each of which either begins with 3 or ends with 3 or both is

(A) 10

(B) 80

(C) 100

(D) 110

Ans: D

Such numbers are 203, 213, 233, 243, 253, 263, 273, 283, 293 and all numbers from 300 to 399. Clearly, number of such numbers = 10 + 100 = 110.

9. The smallest number that must be added to 803642 in order to obtain a multiple of 11 is

(A) 1

(B) 4

(C) 5

(D) 7

Ans: D

On dividing 803642 by 11, we get 4 as remainder.

Required number to be added = (11 – 4) = 7.