Number System Questions and Answers for Bank Exams

Question: 1

The digit in the unit's place of the number 123^{99} is

(A) 1

(B) 2

(C) 3

(D) 7

Ans: D

3^4 gives unit digit 1.

So, $(3^4)^{24}$ gives unit digit 1.

And, 3^3 gives unit digit 7.

$\therefore 3^{99} = (3^4)^{24} \times 3^3$ gives unit digit (1 x 7) i.e. 7.

Question: 2

If n be any natural number then by which largest number $(n^3 - n)$ is always divisible?

(A) 3

(B) 6

(C) 12

(D) 18

Ans: B

$(1^3 - 1) = 0$, $(2^3 - 2) = 6$, $(3^3 - 3) = 24$, $(4^3 - 4) = 60$ and so on, each one of which is divisible by 6.

Question: 3

The sum of four consecutive even numbers A, B, C and D is 180. What is the sum of the set of next four consecutive even numbers?

(A) 169

(B) 204

(C) 212

(D) 214

Ans: C

Let the four consecutive even numbers be a, a + 2, a + 4 and a + 6.

Then, a + a + 2 + a + 4 + a + 6 = 180 ⇒ 4a = 168 ⇒ a= 42.

So, these numbers are 42, 44, 46 and 48.

Sum of next four consecutive even numbers = (50 + 52 + 54 + 56) = 212.

Question: 4

$106 \times 106 - 94 \times 94 = ?$

(A) 1904

(B) 1906

(C) 2200

(D) 2400

Ans: D

$(106 \times 106 - 94 \times 94)$

$= (106)^2 - (94)^2 = (106 + 94)(106 - 94) = (200 \times 12) = 2400.$

Question: 5

$(24 + 25 + 26)^2 - (10 + 20 + 25)^2 = ?$

(A) 352

(B) 752

(C) 2600

(D) 2800

Ans: C

$(24 + 25 + 26)^2 - (10 + 20 + 25)^2 = (75)^2 - (55)^2$

$= (75 + 55)\ (75 - 55) = (130 \times 20) = 2600.$