H.C.F and L.C.M. Aptitude Questions and Answers Pdf

1. The H.C.F. of 1.75, 5.6 and 7 is

a. 0.07

b. 0.7

c. 3.5

d. 0.35

Ans: D

Given numbers with two decimal places are: 1.75, 5.60 and 7.00. Without decimal places, these numbers are: 175, 560 and 700, whose H.C.F. is 35.

∴ H.C.F. of given numbers = 0.35.

2. The number of number-pairs lying between 40 and 100 with their H.C.F. as 15 is

a. 3

b. 4

c. 5

d. 6 -→

Ans:

Numbers with H.C.F. 15 must contain 15 as a factor.

Now, multiples of 15 between 40 and 100 are 45, 60, 75 and 90.

∴ Number-pairs with H.C.F. 15 are (45, 60), (45, 75), (60, 75) and (75, 90).

[∵ H.C.F. of (60, 90) is 30 and that of (45, 90) is 45]

Clearly, there are 4 such pairs.

3. The ratio of two numbers is 13 : 15 and their L.C.M. is 39780. The numbers are

a. 884, 1020

b. 884, 1040

c. 670, 1340

d. 2652, 3060

Ans: D

Let the numbers be $13x$ and $15x$.
Then, their L.C.M. = $195x$.
So, $195\ x = 39780$ or $x = 204$.
$\therefore$ The numbers are 2652 and 3060.

4. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is

a. 276

b. 299

c. 322

d. 345

Ans: C

Clearly, the numbers are (23×13) and (23×14).
$\therefore$ Larger number = $(23 \times 14) = 322$.

5. The capacity of two pots is 120 litres and 56 litres respectively. Find the capacity of a container which can exactly measure the contents of the two pots.

a. 7500 cc

b. 7850 cc

c. 8000 cc

d. 9500 cc

Ans: C

Required capacity

= H.C.F. of 120 litres and 56 litres

= 8 litres = 8000 cc. [∵ 1 litre = 1000 cc]

6. The greatest number which can divide 1356, 1868 and 2764 leaving the same remainder 12 in each case is

a. 64

b. 124

c. 156

d. 260

Ans: A

Required number

= H.C.F. of (1356 – 12), (1868 – 12) and (2764 – 12)

= H.C.F. of 1344, 1856 and 2752 = 64.

7. The number between 4000 and 5000 which is divisible by 12, 18, 21 and 32 is

a. 4023

b. 4032

c. 4203

d. 4302

Ans: B

L.C.M. of 12, 18, 21 and 32 = 2 × 2 × 3 × 3 × 7 × 8

= 2016.

2	12 – 18 – 21 – 32
2	6 – 9 – 21 – 16
3	3 – 9 – 21 – 8
	1 – 3 – 7 – 8

So, the required number is a multiple of 2016 and lies between 4000 and 5000.

Hence, required number = 4032.

8. The least number, which when divided by 12, 15, 20 and 54 leaves in each case a remainder of 8 is

a. 504

b. 536

c. 544

d. 548 -→

Ans:

Required number = (L.C.M. of 12, 15, 20, 54) + 8

= 540 + 8 = 548.

9. The number of pair of positive integers whose sum is 99 and H.C.F. of 9 is

a. 5

b. 4

c. 3

d. 2 -→

Ans:

Number of pair of positive integers whose sum is 99 and HCF is 9 is (9, 90; (18, 81); (27, 72); (36, 63) ; (45, 54).

10. Find the greatest number of four digits which when divided by 10, 15, 21 and 28 leaves 4, 9, 15 and 22 as remainders, respectively.

a. 9654

b. 9666

c. 9664

d. 9864

Ans: A

First, find the greatest number of four digits that is divisible by the L.C.M. of 10, 15, 21 and 28 and then subtract 6 from it to get the required number.