G.S.C.E

Chapter Covered Number System and L.C.M. & H.C.F.
(50 Questions with Options, Answers and Explanations)

Q1

Find the unit place digit in $73 \times 65 \times 81 \times 97$.
(a) 1   (b) 3
(c) 7   (d) 5
(e) 9

Q2

Find the remainder when 15^{100} is divided by 16.
(a) 3   (b) 14
(c) 1   (d) 15
(e) None of these

Q3

Find the greatest 6-digit number that is exactly divisible by 4, 11, 12, 33 and 132.
(a) 999948   (b) 999980
(c) 999950   (d) 999900
(e) 999999

Q4

Which one among the following has the maximum number of divisors?
(a) 667   (b) 587
(c) 561   (d) 329
(e) 157

Q5

When a number is divided by 45, it leaves the remainder 18. Find the remainder when the same number is divided by 15.
(a) 0   (b) 1
(c) 2   (d) 3
(e) 4

Q6

$1 + 2 + 3 \ldots + 27 + 26 + 25 + \ldots + 3 + 2 + 1$ is equal to:
(a) 714   (b) 729
(c) 732   (d) 717
(e) 710

Q7

What is the largest possible value of "x" for which $87\,x\,392\,x\,01$ is divisible by 3?
(a) 6   (b) 7
(c) 8   (d) 9
(e) None of these

Q8

If a number is divided by 203, then the remainder is 90. Find the remainder when the same number is divided by 29.
(a) 10   (b) −1
(c) 3   (d) 5
(e) 7

Q9

Find the difference between $(769)^2$ and $(768)^2$.
(a) 2,763   (b) 799
(c) 1,537   (d) 3,210
(e) 5,430

Q10

Which is the greatest 3-digit prime number?
(a) 991   (b) 997
(c) 893   (d) 995
(e) 999

Q11

Which of the following number is neither prime nor composite?
(a) 0   (b) 1
(c) 2   (d) 3
(e) 5

Q12

Find the sum of all even digits up to 138.
(a) 7,100   (b) 4,830
(c) 3,640   (d) 5,420
(e) None of these

Q13

If x is divisible by 71, then find the remainder when $(x + 13)(x - 13)$ is divided by 71.
(a) 44   (b) 26
(c) 52   (d) 0
(e) Cannot be determined

Q14

How many prime factors exist in the number:
$7^3 \times 6^1 \times 10^2 \times 4^4 \times 5^6$.
(a) 16   (b) 32
(c) 23   (d) 37
(e) None of these

Q15

Which one of the following is the minimum
value of the sum of x and y whose product is
48?
(a) 49   (b) 16
(c) 26   (d) 14
(e) 19

Q16

What is the remainder when $41 + 42 + 43$
$+ \ldots + 96$ is divided by 17?
(a) 11   (b) 13
(c) 7   (d) 16
(e) Cannot be determined

Q17

P and Q are positive integers, and $a = 2 \times 2 \times 2 \times P$ and $b = 7 \times Q$. If both a and b lies
between 150 and 160 excluding both, then
find the value of $Q - P$.
(a) 0   (b) 1
(c) 2   (d) 3
(e) None of these

Q18

The product of two numbers is $\dfrac{c^7}{d}$, if one
among them is c^6, d^5 then find the other
number.
(a) c^4/d^3 (b) d^2/dc^2

(c) c^3/d^3 (d) $\dfrac{c}{d^6}$

(e) None of these

Q19

Find the sum of all odd numbers between
40 and 50.
(a) 220   (b) 225
(c) 200   (d) 220
(e) None of these

Q20

Find the largest prime number that exactly divides 913.
(a) 71   (b) 59
(c) 83   (d) 97
(e) 11

Q21

Find the difference between the place values of 8 in 983172804.
(a) 77998200   (b) 79992000
(c) 79999200   (d) 79991200
(e) None of these

Q22

Which one of the following is not a composite number?
(a) 1   (b) 91
(c) 213   (d) 133
(e) 119

Q23

Find the number of zeroes in $18 \times 125 \times 63 \times 4 \times 17$.
(a) 3   (b) 2
(c) 5   (d) 4
(e) None

Q24

If $1^3 + 2^3 + 3^3 + \ldots + 50^3 = 1625625$, then find the value of $7 + 56 + 189 + \ldots + 875000$.
(a) 11379375   (b) 43298700
(c) 67119235   (d) 12319635
(e) 10098385

Q25

Find the total number of different factors of 240 excluding 1 and 240.
(a) 18   (b) 22
(c) 20   (d) 16
(e) 14

Q26

Find the HCF of 6.3, 1.33 and 56.7.
(a) 0.07   (b) 7
(c) 70   (d) 0.7
(e) None of these

Q27

Find the greatest number which when divides 103, 170 and 275 leaves the remainder 5, 16 and 37 respectively.
(a) 32   (b) 14
(c) 70   (d) 7
(e) Cannot be determined

Q28

Find the largest possible three-digit number that leaves the same remainder when divided by 159, 755 and 1947.
(a) 596   (b) 695
(c) 956   (d) 559
(e) 659

Q29

The HCF of two numbers is 6 and their sum is 42. How many such pair of numbers exists?
(a) 1 pair   (b) 2 pairs
(c) 3 pairs   (d) 4 pairs
(e) 5 pairs

Q30

Find the largest number that on dividing 50, 90 and 110 leaves the remainder 8, 6 and 5 respectively.
(a) 42   (b) 21
(c) 84   (d) 28
(e) 46

Q31

A number when divided by 5, 7, 9 and 11 leaves the remainder 2, 4, 6 and 8 respectively. Which is the least possible number?
(a) 6,384   (b) 4,385
(c) 8,346   (d) 3,468
(e) 4,367

Q32

A person has to store 66 litres, 132 litres and 154 litres of three different liquids in different containers of equal size. Find the maximum number of containers required by him.
(a) 16
(b) 11
(c) 17
(d) 19
(e) 12

Q33

Three friends A, B and C started walking in a circular park whose circumference is 2.4 km. They walked at the rate of 15 m/sec, 20 m/sec and 30 m/sec in the same direction. How long it will take for them to be together again at the same place?
(a) 5 minutes
(b) 152 seconds
(c) 15 minutes
(d) 8 minutes
(e) Cannot be determined

Q34

The LCM of four different numbers is 960. Find which of the following cannot be their HCF
(a) 120
(b) 80
(c) 420
(d) 240
(e) 160

Q35

Find the greatest number of four digits which when divided by 4, 6 and 12 leaves the remainder 3 in each case.
(a) 9,990
(b) 9,999
(c) 9,996
(d) 9,992
(e) 9,990

Q36

Find the greatest number which when divides 416, 888, 1,537 and 2,245 leaves the same remainder in each case.
(a) 236
(b) 59
(c) 243
(d) 118
(e) 177

Q37

Four bells begin to toll together at intervals of 18, 45, 36 and 144 seconds. After what interval of time will they toll together?
(a) 10 minutes
(b) 520 seconds
(c) 12 minutes
(d) 7 minutes
(e) None of these

Q38

Three pieces of timber measuring 33 m, 55 m and 77 m long have to be cut into pieces of equal length. Which is the greatest possible length of each piece?
(a) 33 m   (b) 22 m
(c) 22.7 m   (d) 11 m
(e) None of these

Q39

Prabha, Sonali and Rashmi started running around a circular park. They completed one round in 45 seconds, 60 seconds and 36 seconds respectively. After how much time will they meet at the starting point?
(a) 5 minutes   (b) 3 minutes
(c) 7 minutes   (d) 11 minutes
(e) None of these

Q40

Find the number that when divided by 8, 15 and 54 leaves the remainder 5, 12 and 51 respectively.
(a) 1,080   (b) 1,087
(c) 1,083   (d) 1,077
(e) 1,075

Q41

The traffic lights at three different signals change after 30 seconds, 45 seconds and 60 seconds respectively. If they all change simultaneously at 11:27 am, then at what time will they again change simultaneously?
(a) 11:30 am
(b) 12:03 pm
(c) 11:42 am
(d) 12:00 noon
(e) None of these

Q42

Surabhi has 184 kg, 168 kg and 104 kg of different food grains at her retail shop. She wants to measure all food grains in exact measure with a single container. Find the greatest measure of the container required by her.
(a) 7   (b) 24
(c) 19   (d) 8
(e) None of these

Q43

A number when divided successively by 15, 21, 35 and 70 leaves the remainder 10, 16, 30 and 65 respectively. The least number is:
(a) 200   (b) 201
(c) 205   (d) 250
(e) 300

Q44

Find the least number which when decreased by 11 is exactly divisible by 15, 30, 18 and 45.
(a) 101   (b) 79
(c) 90   (d) 72
(e) None of these

Q45

Find the greatest number which when divided by 597 and 650 leaves the remainder 7 and 2 respectively.
(a) 8   (b) 17
(c) 10   (d) 28
(e) None of these

Q46

The smallest number which divides 9, 27, and 36 leaving the remainder 5 each time is:

(a) 72   (b) 92

(c) 96   (d) 113

(e) None of these

Q47

Find the least perfect square which is exactly divisible by 3, 4, 5, 6 and 10.

(a) 2,500

(b) 1,600

(c) 800

(d) 900

(e) None of these

Q48

The greatest number that divides 62, 111, 202 and 321, leaving the same remainder in each case is:

(a) 5   (b) 1

(c) 11   (d) 7

(e) None of these

Q49

If the LCM of the first 1,000 natural numbers is N, then what is the LCM of the first 1,010 natural numbers.

(a) $N \times 1{,}003 \times 1{,}009$

(b) $N \times 1{,}009$

(c) $N \times 1{,}007 \times 1{,}003$

(d) $1{,}009 \times 1{,}007 \times 1{,}003 \times N$

(e) None of these

Q50

Find the HCF of $2^4 \times 3^5 \times 6^3 \times 7^2$, $2^5 \times 3^2 \times 6^1 \times 7^5$ and $2^3 \times 3^4 \times 6^2 \times 7^1 \times 9^2$.

(a) $2^4 \times 3^2 \times 6^2 \times 7^1 \times 9^2$

(b) $2^3 \times 3^2 \times 6 \times 7 \times 9^2$

(c) $2^3 \times 3^2 \times 6 \times 7$

(d) $2^5 \times 3^5 \times 6^3 \times 7^5 \times 9^2$

(e) None of these