# 2007 MBA - MATHEMATICS OLD QUESTION PAPER

## (LCM,HCF)

TIME – 3HOUR

MARK – 100

Find the HCF and LCM of the polynomials $(y^2 – 5y + 6)$ and $(y^2 – 7y + 10)$.

1. $(y – 2)$, $(y – 2) (y – 3) (y – 5)$
2. $(y – 2)$, $(y – 2) (y – 3)$
3. $(y – 3)$, $(y – 2) (y – 3) (y – 5)$
4. None of these

Mark for revision | Unmark
The numbers 11,284 and 7655, when divided by a certain number of 3 digits, leave the same remainder. Find that number of 3 digits.

1. 191
2. 382
3. 119
4. None of these

Mark for revision | Unmark
The LCM of two numbers is 588, and their product is 57,624. Find the difference between the numbers.

1. 480
2. 196
3. 392
4. None of these

Mark for revision | Unmark
A rectangular piece of cloth has dimensions 16m ´ 6m. How many largest square pieces, all of the same size, can cut out of it, such that no cloth is wasted?

1. 42
2. 24
3. 12
4. 2

Mark for revision | Unmark
Shirish and Girish were running around a circular track. Shirish completes three rounds in one hour and

Girish completes five rounds in 2 hours. If both of them start running at the same time, how many times they both will meet at the starting point in 10 hours?

1. 7
2. 8
3. 6
4. 5

Question 6 of 25
P is the set of prime factors of 7040 and Q is the set of prime factors of 4180. If x is a member of set P and y is a member of set Q. What is the greatest possible value of y – x?

1. 14
2. 17
3. 8
4. None of these

Question 7 of 25
The HCF of two numbers is 21 and their sum is 105. The LCM of the numbers is

1. 189 or 147
2. 126 or 84
3. 84 or 145
4. 126 or 145

Question 8 of 25
Suppose you have 108 green marbles and 144 red marbles. You decide to separate them into packages of equal number of marbles of same colour. Find the maximum possible number of marbles in each package.

1. 4
2. 36
3. 9
4. 24

Question 9 of 25
What is the greatest number that will divide 2930 and 3250 and will leave as remainders 7 and 11 respectively?

1. 77
2. 79
3. 70
4. None of these

If the LCM of first 60 natural numbers is x, then find the LCM of first 67 natural numbers.

1. 67 x
2. 6387 x
3. $8174 x
4. 4087 x

Find the numbers between 400 & 550 such that when divided by 6, 8, or 9 leave a remainder 5.

1. 421 or 493
2. 436 & 462
3. 509 & 437
4. 462, 421

What is the smallest sum of money which contains Rs.2.50, Rs.20, Rs.1.20 and Rs.7.50.

1. What is the smallest sum of money which contains Rs.2.50, Rs.20, Rs.1.20 and Rs.7.50.
Rs. 60
2. Rs. 80
3. Rs. 90
4. Rs. 100

Find the least number divisible by 12, 32, 42 and 63 and it must be a perfect square.

1. 20126
2. 4032
3. 28224
4. None of these

How many numbers between 2500 and 3000 which is divisible by 21, 24, and 28.

1. 6
2. 5
3. 4
4. 3

HCF of three numbers is 12. If they are in the ratio 1 : 2 : 3, then the numbers are

1. 12, 24, 36
2. 10, 20, 30
3. 5, 10, 15
4. 4, 8, 12

The traffic lights at three different road crossing change after every 48 sec; 72 sec; and 108 sec. respectively. If they all change simultaneously at 9:55:00 hrs; find when they will again change simultaneously?

1. 10 : 02 : 12 Hrs
2. 10 : 02 : 24 Hrs
3. 10 : 02 : 36 Hrs
4. 10 : 02 : 48 Hrs

The HCF and LCM of two numbers are 13 and 455 respectively. If one of the numbers lies between 75 and 125 then that number is _____.

1. 91
2. 78
3. 117
4. 104

Find the greatest number of 5 digits which when divided by 8, 12, 15 and 20 leaves respectively 5, 9, 12 and 17 as remainders.

1. 99957
2. 77757
3. 99997
4. 90007

About the number of pairs which have 18 as their HCF and 156 as their LCM, the conclusion can be

1. only one such pair exists

2. only two such pairs exist
3. many such pair exist
4. no such pair exists

Mark for revision | Unmark
Question 20 of 25
P is the smallest number which when multiplied by 2, is divisible by 6, 24, 39 and 90. Q is the smallest number which when divided by 2 is divisible by 49, 28, 21 and 35. What is the sum of P and Q?

1. 8220
2. 7815
3. 8436
4. 8216

Mark for revision | Unmark
Question 21 of 25
Three equal circular wheels revolve round a common horizontal axis with different velocities. The first makes a revolution in 5 1/3 minutes, the second in 2 6/7 minutes and the third in 3 3/7 minutes. Three marking, one in each wheel, are in a horizontal line at a certain moment. What is the shortest interval after which they will be in the same horizontal line again?

1. 24 min
2. 300 min
3. 2 hrs
4. 4 hrs

Mark for revision | Unmark
Question 22 of 25
If the HCF and LCM of two numbers are 17 and 102 respectively and the HCF and LCM of two other numbers are 68 and 476 respectively. Then find the sum of the HCF and LCM of these four numbers.

1. 1435
2. 1345
3. 1445
4. None of these

Mark for revision | Unmark
Question 23 of 25
If there are 8 numbers whose HCF has to be found by the division method, how many steps would be needed in order to find it?

1. 8
2. 7
3. 6
4. 4

Mark for revision | Unmark
Question 24 of 25

If the HCF of 2 numbers is 48 and the HCF of 2 other numbers is 36. What is the HCF of all the four numbers?

1. 4
2. 8
3. 12
4. none of these

Find the side of largest possible square slabs which can be paved on the floor of a room 5m 44 cm long and 3 m 74 cm broad. Also find the number of such slabs required to pave the floor.

1. 32 cms, 170
2. 34 cms, 176
3. 30 cms, 180
4. None of these