

# TARUN CLASSES OF MATHEMATICS

## REAL NUMBERS

TIME : 1 HOUR

Name :

### EXAM CONTAINS MCQ ONLY :

- Bells toll together at 9.00 am. They toll after 7, 8, 11 and 12 seconds respectively. How many times will they toll together again in the next 3 hours?  
A) 3                      B) 4  
C) 5                      D) 6
- The largest number which divides 70 and 125, leaving remainders 5 and 8 respectively, is  
A) 13                      B) 65  
C) 875                    D) N.O.T.
- If  $A = 2n + 13$  &  $B = n + 7$ , where  $n$  is a natural number, then the HCF of  $A$  &  $B$   
A) 1                      B) 3  
C) 13                     D) N.O.T.
- A forester wants to plant 66 apple trees, 88 banana trees and 110 mango trees in equal rows (in terms of number of trees). Also he wants to make distinct rows of trees (i.e., only one type of trees in one row). The number of minimum rows required are  
A) 2                      B) 3  
C) 10                     D) 12
- Two natural numbers whose sum is 85 and the least common multiple is 102 are  
A) 30 & 55              B) 17 & 68  
C) 35 & 55              D) 51 & 34
- $3.2727272727\dots$  is  
A) an integer                                      B) a rational number  
C) an irrational number                        D) N.O.T.
- Without actually division, the terminating decimal expansion  $\frac{51}{1500}$  is in form of  $\frac{17}{2^n \times 5^m}$ , then  $(m+n)$  is equal to  
A) 2                      B) 3  
C) 5                      D) 8
- After how many decimal places the decimal expansion of the rational number  $\frac{105}{2^2 \times 5^7 \times 7}$  will terminate  
A) 2                      B) 7  
C) 6                      D) Not terminating
- The ratio of LCM and HCF of the least composite and the least prime numbers is  
A) 1:2                    B) 2:1  
C) 1:1                    D) 1:3
- Prime factors of the denominator of a rational number with the decimal expansion 44.151 are  
A) 2,3                    B) 2,3,5  
C) 2,5                    D) 3,5
- If  $\text{LCM}(x, 18) = 36$  and  $\text{HCF}(x, 18) = 2$ , then  $x$  is  
A) 2                      B) 3  
C) 5                      D) 4
- If sum of two numbers is 1215 and their HCF is 81, then the possible number of pairs of such numbers are  
A) 2                      B) 3  
C) 5                      D) 4
- The LCM of two prime numbers  $p$  and  $q$  ( $p > q$ ) is 221. Find the value of  $3p - q$ .  
A) 4                      B) 28  
C) 38                    D) 18
- The smallest number by which  $1/13$  should be multiplied so that its decimal expansion terminates after two decimal places is  
A)  $\frac{13}{100}$                       B)  $\frac{13}{10}$   
C)  $\frac{10}{13}$                       D)  $\frac{100}{13}$
- Rational number which can be expressed as a terminating decimal number will be :  
A)  $\frac{77}{100}$                       B)  $\frac{129}{2^2 \times 5^7 \times 7}$   
C)  $\frac{13}{3125}$                     D)  $\frac{8}{17}$
- LCM & HCF of two numbers are 1001 & 7 respectively. How many such pairs are possible ?  
A) 0                      B) 1  
C) 2                      D) 7
- $P$  is LCM of 2,4,6,8,10 and  $Q$  is LCM of 1,3,5,7,9 &  $L$  is LCM of  $P$  &  $Q$ , Which of following is true ?  
A)  $L = 21P$               B)  $L = 4Q$   
C)  $L = 63Q$               D)  $L = 16P$
- Product of two co prime numbers is 117, their LCM should be .....  
A) 1                      B) 117  
C) equal to HCF                                      D) N.O.T.
- Three farmers have 490 kg, 588 kg and 882 kg of wheat respectively. Find the maximum capacity of a bag so that the wheat can be packed in exact number of bags.  
A) 98kg                    B) 290 kg  
C) 200kg                   D) 350 kg
- Assertion : The HCF of two numbers is 5 and their product is 150, then their LCM is 30  
Reason : For any two positive integers  $a$  and  $b$ ,  $\text{HCF}(a, b) \times \text{LCM}(a, b) = a \times b$ .  
(a) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).  
(c) Assertion (A) is true but reason (R) is false.  
(d) Assertion (A) is false but reason (R) is true.
- $a$  and  $b$  are two positive integers such that the least prime factor of  $a$  is 3 and the least prime factor of  $b$  is 5. Then the least prime factor of  $a + b$  will be  
A) 2                      B) 8  
C) 5                      D) 3
- The HCF and LCM of 378, 180 and 420 will be  
(A) 6 and 3980    (B) 12 and 3780  
(C) 6 and 3780    (D) 12 and 3980
- Select the least number that is divisible by all numbers between 1 and 102 (both inclusive).  
A) 2520                    B) 5040  
C) 1010                    D) N.O.T.