MCQ WORKSHEET-I
REAL NUMBERS

1. A rational number between $\frac{3}{5}$ and $\frac{4}{5}$ is:

(a) $\frac{7}{5}$ (b) $\frac{7}{10}$ (c) $\frac{3}{10}$ (d) $\frac{4}{10}$

2. A rational number between $\frac{1}{2}$ and $\frac{3}{4}$ is:

(a) $\frac{2}{5}$ (b) $\frac{5}{8}$ (c) $\frac{4}{3}$ (d) $\frac{1}{4}$

3. Which one of the following is not a rational number:

(a) $\sqrt{2}$ (b) 0 (c) $\sqrt{4}$ (d) $\sqrt{-16}$

4. Which one of the following is an irrational number:

(a) $\sqrt{4}$ (b) $3\sqrt{8}$ (c) $\sqrt{100}$ (d) $-\sqrt{0.64}$

5. $3\frac{3}{8}$ in decimal form is:

(a) 3.35 (b) 3.375 (c) 33.75 (d) 337.5

6. $\frac{5}{6}$ in the decimal form is:

(a) $0.8\bar{3}$ (b) $0.8\overline{33}$ (c) $0.6\bar{3}$ (d) $0.6\overline{33}$

7. Decimal representation of rational number $\frac{8}{27}$ is:

(a) $0.\overline{296}$ (b) $0.29\bar{6}$ (c) $0.2\overline{96}$ (d) 0.296

8. 0.6666…….. in $\frac{p}{q}$ form is:

(a) $\frac{6}{99}$ (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) $\frac{1}{66}$

9. The value of $\left(\sqrt{5}+\sqrt{2}\right)\left(\sqrt{5}-\sqrt{2}\right)$ is:

(a) 10 (b) 7 (c) 3 (d) $\sqrt{3}$

10. $0.\overline{36}$ in $\frac{p}{q}$ form is:

(a) $\frac{6}{99}$ (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) none of these

MCQ WORKSHEET-II
REAL NUMBERS

1. $\sqrt{5}-3-2$ is
(a) a rational number (b) a natural number (c) equal to zero (d) an irrational number

2. Let x = $\frac{7}{20\times 25}$ be a rational number. Then x has decimal expansion, which terminates:
(a) after four places of decimal (b) after three places of decimal
(c) after two places of decimal (d) after five places of decimal

3. The decimal expansion of $\frac{63}{72\times 175}$ is
(a) terminating (b) non-terminating
(c) non termination and repeating (d) an irrational number

4. If HCF and LCM of two numbers are 4 and 9696, then the product of the two numbers is:
(a) 9696 (b) 24242 (c) 38784 (d) 4848

5. $\left(2+\sqrt{3}+\sqrt{5}\right)$ is :
(a) a rational number (b) a natural number (c) a integer number (d) an irrational number

6. If $\left(\frac{9}{7}\right)^3\times\left(\frac{49}{81}\right)^{2x-6}=\left(\frac{7}{9}\right)^9$, the value of x is:
(a) 12 (b) 9 (c) 8 (d) 6

7. The number .211 2111 21111….. is a
(a) terminating decimal (b) non-terminating decimal
(c) non termination and non-repeating decimal (d) none of these

8. If $(m)^n=32$ where m and n are positive integers, then the value of $(n)^{mn}$ is:
(a) 32 (b) 25 (c) 5^{10} (d) 5^{25}

9. The number $0.\overline{57}$ in the $\frac{p}{q}$ form $q\neq 0$ is
(a) $\frac{19}{35}$ (b) $\frac{57}{99}$ (c) $\frac{57}{95}$ (d) $\frac{19}{30}$

10. The number $0.5\overline{7}$ in the $\frac{p}{q}$ form $q\neq 0$ is
(a) $\frac{26}{45}$ (b) $\frac{13}{27}$ (c) $\frac{57}{99}$ (d) $\frac{13}{29}$

11. Any one of the numbers a, a + 2 and a + 4 is a multiple of:
(a) 2 (b) 3 (c) 5 (d) 7

12. If p is a prime number and p divides k^2, then p divides:
(a) $2k^2$ (b) k (c) 3k (d) none of these

MCQ WORKSHEET-III
REAL NUMBERS

1. π is
(a) a natural number (b) not a real number
(c) a rational number (d) an irrational number

2. The decimal expansion of π
(a) is terminating (b) is non terminating and recurring
(c) is non terminating and non recurring (d) does not exist.

3. Which of the following is not a rational number?
(a) $\sqrt{6}$ (b) $\sqrt{9}$ (c) $\sqrt{25}$ (d) $\sqrt{36}$

4. Which of the following is a rational number?
(a) $\sqrt{36}$ (b) $\sqrt{12}$ (c) $\sqrt{14}$ (d) $\sqrt{21}$

5. If a and b are positive integers, then HCF (a, b) x LCM (a, b) =
(a) a x b (b) a + b (c) a – b (d) a/b

6. If the HCF of two numbers is 1, then the two numbers are called
(a) composite (b) relatively prime or co-prime
(c) perfect (d) irrational numbers

7. The decimal expansion of $\frac{93}{1500}$ will be
(a) terminating (b) non-terminating (c) non-terminating repeating
(d) non-terminating non-repeating.

8. $\sqrt{3}$ is
(a) a natural number (b) not a real number
(c) a rational number (d) an irrational number

9. The HCF of 52 and 130 is
(a) 52 (b) 130 (c) 26 (d) 13

10. For some integer q, every odd integer is of the form
(a) q (b) q + 1 (c) 2q (d) none of these

11. For some integer q, every even integer is of the form
(a) q (b) q + 1 (c) 2q (d) none of these

12. Euclid's division lemma state that for any positive integers a and b, there exist unique integers q and r such that a = bq + r where r must satisfy
(a) $1 < r < b$ (b) $0 < r \leq b$ (c) $0 \leq r < b$ (d) $0 < r < b$

MCQ WORKSHEET-IV
REAL NUMBERS

1. A ..... is a proven statement used for proving another statement.
(a) axiom (b) theorem (c) lemma (d) algorithm

2. The product of non-zero rational ad an irrational number is
(a) always rational (b) always irrational (c) rational or irrational (d) one

3. The HCF of smallest composite number and the smallest prime number is
(a) 0 (b) 1 (c) 2 (d) 3

4. Given that HCF(1152, 1664) = 128 the LCM(1152, 1664) is
(a) 14976 (b) 1664 (c) 1152 (d) none of these

5. The HCF of two numbers is 23 and their LCM is 1449. If one of the numbers is 161, then the other number is
(a) 23 (b) 207 (c) 1449 (d) none of these

6. Which one of the following rational number is a non-terminating decimal expansion:
(a) $\frac{33}{50}$ (b) $\frac{66}{180}$ (c) $\frac{6}{15}$ (d) $\frac{41}{1000}$

7. A number when divided by 61 gives 27 quotient and 32 as remainder is
(a) 1679 (b) 1664 (c) 1449 (d) none of these

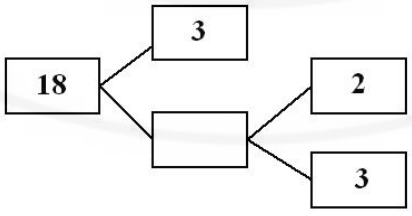
8. The product of L.C.M and H.C.F. of two numbers is equal to
(a) Sum of numbers (b) Difference of numbers
(c) Product of numbers (d) Quotients of numbers

9. L.C.M. of two co-prime numbers is always
(a) product of numbers (b) sum of numbers
(c) difference of numbers (d)none

10. What is the H.C.F. of two consecutive even numbers
(a) 1 (b)2 (c) 4 (d) 8

11. What is the H.C.F. of two consecutive odd numbers
(a) 1 (b) 2 (c) 4 (d) 8

12. The missing number in the following factor tree is
(a) 2 (b) 6 (c) 3 (d) 9



MCQ WORKSHEET-V
REAL NUMBERS

1. For some integer m, every even integer is of the form
(a) m (b) $m + 1$ (c) $2m$ (d) $2m + 1$

2. For some integer q, every odd integer is of the form
(a) q (b) $q + 1$ (c) $2q$ (d) $2q + 1$

3. $n^2 - 1$ is divisible by 8, if n is
(a) an integer (b) a natural number
(c) an odd integer (d) an even integer

4. If the HCF of 65 and 117 is expressible in the form $65m - 117$, then the value of m is
(a) 4 (b) 2 (c) 1 (d) 3

5. The largest number which divides 70 and 125, leaving remainders 5 and 8, respectively, is
(a) 13 (b) 65 (c) 875 (d) 1750

6. If two positive integers a and b are written as $a = x^3y^2$ and $b = xy^3$; x, y are prime numbers, then HCF (a, b) is
(a) xy (b) xy^2 (c) x^3y^3 (d) x^2y^2

7. If two positive integers p and q can be expressed as $p = ab^2$ and $q = a^3b$; a, b being prime numbers, then LCM (p, q) is
(a) ab (b) a^2b^2 (c) a^3b^2 (d) a^3b^3

8. The product of a non-zero rational and an irrational number is
(a) always irrational (b) always rational
(c) rational or irrational (d) one

9. The least number that is divisible by all the numbers from 1 to 10 (both inclusive) is
(a) 10 (b) 100 (c) 504 (d) 2520

10. The decimal expansion of the rational number $\frac{14587}{1250}$ will terminate after:
(a) one decimal place (b) two decimal places
(c) three decimal places (d) four decimal places

11. The decimal expansion of the rational number $\frac{33}{2^2.5}$ will terminate after
(a) one decimal place (b) two decimal places
(c) three decimal places (d) more than 3 decimal places