

CHAPTER 1 : REAL NUMBERS

S.No.	QUESTIONS
1	The prime factorisation of natural number 288 is: (a) $2^5 \times 3^2$ (b) $2^4 \times 3^2$ (c) $2^5 \times 3^5$ (d) $2^5 \times 3^3$
2	If the HCF of 360 and 64 is 8, then their LCM is: (a) 2880 (b) 2530 (c) 672 (d) 2780
3	If two positive integers A and B can be expressed as $A = xy^3$ and $B = x^4y^2z$; x, y being prime numbers then HCF (A, B) is : (a) x^4y^3 (b) x^4y^2z (c) xy^2z (d) xy^2
4	The LCM of two numbers is 1200. Which of the following cannot be their HCF? (a) 600 (b) 500 (c) 400 (d) 200
5	If $\text{HCF}(26, 169) = 13$, then $\text{LCM}(26, 169) = ?$ (a) 26 (b) 52 (c) 338 (d) 13
6	An army contingent of 616 members is to march behind an army band of 32 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march? (a) 5 (b) 6 (c) 7 (d) 8
7	The HCF and LCM of 12, 21, 15 respectively are : (a) 3, 420 (b) 3, 515 (c) 4, 420 (d) 4, 525
8	The ratio of LCM and HCF of the least composite number and the least prime number is : (a) 3:2 (b) 2:7 (c) 2:1 (d) 1:2
9	If $\text{LCM}(x, 18) = 36$ and $\text{HCF}(x, 18) = 2$, then $x =$ (a) 2 (b) 3 (c) 4 (d) 6
10	If $(a \times 5)^n$ ends with the digit zero for every natural number n , then a is (a) a prime number (b) an even number (c) an odd number (d) none of these
11	There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students: (a) 34 (b) 52 (c) 48 (d) 63
12	Three bells ring at intervals of 4, 7 and 14 minutes. All the three rang at 7 AM. When will they ring together again? (a) 7:28 AM (b) 7:54 AM (c) 7:32 AM (d) 7:40 AM

13	The product of a non-zero rational number and an irrational number is (a)always rational (b)always irrational (c)rational or irrational (d)always one
14	The smallest irrational number by which $\sqrt{18}$ should be multiplied so as to get a rational number is (a) $\sqrt{3}$ (b) 2 (c) $\sqrt{2}$ (d) $\sqrt{18}$
15	If two positive integers a and b are written as $a = p^3q^2$ and $b = pq^3$; p, q are prime numbers, then HCF (a, b) is: (a) pq^2 (b)pq (c) p^3q^3 (d) p^2q^2
16	On a morning walk, three persons step off together and their steps measure 40 cm, 42 cm and 45 cm, respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps? (a)2540 (b)2560 (c)2650 (d)2520
17	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)98 (b)290 (c)350 (d)450
18	$6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5$ is an example of : (a)prime number (b)composite number (c)irrational number (d)none of the above
19	L.C.M of two numbers is 60 times of their H.C.F. Sum of H.C.F and L.C.M is 366. If one number is 72, then find the other number. (a)60 (b)20 (c)30 (d)120
20	Two numbers are in the ratio 15:11 their HCF is 13 and LCM is 2145 then find the number. (a)205,132 (b)175,305 (c)195,143 (d)230,155
21	The LCM of the two numbers is 9 times their HCF. The sum of LCM and HCF is 500. Find their HCF. (a)50 (b)70 (c)90 (d)40
	(QUE.22 TO 30) <i>Direction:</i> In the following questions, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as: (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.
22	Assertion: The H.C.F. of two numbers is 16 and their product is 3072. Then their L.C.M. = 162. Reason: If a and b are two positive integers, then $\text{H.C.F.} \times \text{L.C.M.} = a \times b$.
23	Assertion: '2' is an example of a rational number. Reason: The square roots of all positive integers are irrational numbers.
24	Assertion: If the HCF of two numbers is 5 and their product is 150, then their LCM is 30. Reason: For any two positive integers p and q, $\text{HCF}(p, q) \times \text{LCM}(p, q) = p \times q$
25	Assertion: (18, 25) is a pair of co-primes. Reason: Pair of co-prime has a common factor 2.
26	Assertion: $\sqrt{x}$ is an irrational number, where x is a prime number. Reason: Square root of any prime number is an irrational number.
27	Assertion: $3 \times 5 \times 7 + 7$ is a composite number. Reason: A composite number has factors one, itself and any other natural number.
28	Assertion: $(2 - \sqrt{5})$ is an irrational number. Reason: The sum or difference of a rational and an irrational number is irrational.
29	Assertion: 12^n ends with the digit zero, where n is any natural number. Reason: Any number ends with digit zero, if its prime factor is of the form $2^m \times 5^n$, where m and n are natural numbers.
30	Assertion: HCF of (11,17) is 1. Reason: If p and q are prime then HCF of (p,q) is always 1.

ANSWERS OF CHAPTER 1 (REAL NUMBERS)

Q. NO.	QUESTION
1	(a) $2^5 \times 3^2$
2	(a)2880
3	(d) xy^2
4	(b)500
5	(c)338
6	(d)8
7	(a)3,420
8	(c)2:1
9	(c)4
10	(b)an even number
11	(b)52
12	(a)7:28 AM
13	(b)always irrational
14	(c) $\sqrt{2}$
15	(a) pq^2
16	(d)2520
17	(a)98
18	(b)composite number
19	(d)120
20	(c)195,143
21	(a)50
22	(d)
23	(c)
24	(c)
25	(c)
26	(a)
27	(a)
28	(a)
29	(d)
30	(a)