Lesson

3

K L E TECHNOLOGICAL UNIVERSITY
DEPARTMENT OF HUMANITIES

PROFESSIONAL APTITUDE AND LOGICAL REASONING

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Number System-2

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Number System – 2

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01 Which of the following is a perfect number?
(a) 496 (b) 8126 (c) 26 (d) 498

02 Identify the pair of co–prime numbers?
(a) 4, 12 (b) 3 , 33 (c) 5 , 25 (d) 7 , 12

03 Which one of the following is recurring decimal form of 5 / 9?
(a) 0.88888 (b) 0.55555 (c) 0.66666 (d) 0.78787

04 Which one of the following is Vulgar Fraction form of 1.1333333333333..?
(a) 17 / 15 (b) 562 / 495 (c) Either (a) or (b) (d) None of these

05 Which of the following is definitely not a perfect square?
(a) 50625 (b) 471969 (c) 25167 (d) 2916

06 Which of the following is definitely a non– prime number?
(a) 79 (b) 89 (c) 119 (d) 211

07 What is the LCM of 4/3, 4/5, 6/7?
(a) 12 (b) 21 (c) 105 (d) none of these

08 In the above example, what if the HCF of the given three fractions?
(a) 2 (b) 2 / 105 (c) 52. 5 (d) 105

09 The LCM of two numbers is 42 & their HCF is 4; what is the value of the other number if one of them is 21?
(a) 8 (b) 84 (c) 21 (d) Can't say

10 Which of the following fractions is the greatest?
(a) 1 / 2 (b) 2 / 7 (c) 1 / 4 (d) 1/ 5

11 What is the value of x in the equation $2^{x+3} \times 4^x = 32768$?
(a) 1 (b) 4 (c) 3 (d) 2

12 What is the highest power of 5 in 100! , such that the remainder obtained is zero.
(a) 4 (b) 20 (c) 24 (d) None of these

13 What is the number of zeroes at end in 100!
(a) 4 (b) 24 (c) 20 (d) None of these

14 What is the Unit digit (U.D.) of product (506 × 104 × 102 × 204)?
(a) 4 (b) 2 (c) 6 (d) 8

15 What is the nature of (pq + qr)? Provided p = odd, q = even, r = odd.
(a) Odd (b) Even (c)Indeterminable (d) Can't say

16 What is the highest power of 3 in 105! , such that the remainder obtained is zero.
(a) 35 (b)49 (c) 50 (d) 4

17 From a certain number 3 is taken, and then divided by 4. The quotient is then increased by 4 and divided by 5 and the result is 2. What is the number?
(a) 27 (b) 28 (c) 29 (d) All of these

18 What is the result of simplification $3\sqrt{18} + 2\sqrt{8} + 3\sqrt{32} - 2\sqrt{50}$?
(a) $15\sqrt{2}$ (b) $10\sqrt{2}$ (c) $25\sqrt{2}$ (d) None of these

19 Find the remainder obtained when 43^4 divided by 6?
(a) 6 (b) 1 (c) 7 (d) None of these

20 Find the remainder obtained when $(19^4 + 2)$ divided by 6?
(a) 2 (b) 4 (c) 5 (d) 3

21 Remainder obtained when you divide a number by 10 is 1. What is the remainder obtained when you divide the same number by 20?
(a) 1 (b) 11 (c) Either (a) or (b) (d) Can't say

22 What is the result of summation 1 + 2 + 3 + … + 7?
(a) 19 (b) 21 (c) 15 (d) 28

23 What is the result of summation $1^2 + 2^2 + \ldots + 6^2$?
(a) 42 (b) 66 (c) 55 (d) 91

24 What is the result of summation $1^3 + 2^3 + \ldots\ldots + 7^3$?
(a) 49 (b)280 (c) 441 (d) 784

25 Identify the pair of co–prime numbers?
(a) 6 , 42 (b) 3 , 36 (c) 5 , 15 (d) 7, 22

26 Which one of the following is recurring decimal form of 43 / 99?
(a) 0.434343 (b) 0.444444 (c) 0.555555 (d) Can't Say

27 Which one of the following is Vulgar Fraction form of 1.1454545454545..?
(a) 11 / 10 (b) 189 / 165 (c) 165 / 189 (d) None of these

28 What is the LCM of 4/7, 6/11, 7/9?
(a) 24 (b) 84 (c) 48 (d) None of these

29 What is the HCF of 4/7, 6/11, 7/9?
(a) 1 / 693 (b) 1 / 69 (c) 1 / 6 (d) 1 / 9

30 The LCM of two numbers is 560 & their HCF is 4; what is the value of the other number if one of them is 70?
(a) 280 (b) 61 (c) 32 (d) Can't be determined

31 Which of the following fractions is the greatest?
(a) 1/ 4 (b) 2 / 3 (c) 3 / 7 (d) 5 / 6

32 What is the highest power of 5 in 30! , such that the remainder obtained is zero.
(a) 10 (b)11 (c) 7 (d) 6

33 What is the number of zeroes at end in 10!
(a) 2 (b) 5 (c) 6 (d) 8

34 What is the Unit digit (U.D.) of product (517 × 111 × 113 × 216)?
(a) 2 (b) 8 (c) 1 (d) 6

35 What is the nature of (mn + no + op + mp)? Provided m = odd, n = even, o = odd, p =odd.
(a) Odd (b) Even (c)Indeterminable (d) Can't say

36 What is the highest power of 2 in 12! , such that the remainder obtained is zero.
(a) 6 (b) 5 (c) 8 (d) None of these

37 Find the remainder obtained when 20^4 divided by 6?
(a) 2 (b) 4 (c) 3 (d) 5

38 Remainder obtained when you divide a number by 10 is 4. What is the remainder obtained when you divide the same number by 20?
(a) 4 (b) 14 (c) Either (a) or (b) (d) None of these

39 A machine has three wheels each of radius 7 m, revolving at speeds of 2, 4 & 11 m/sec, whenever the three wheels are at initial position simultaneously, a bell rings. When will the bell ring for the 2^{nd} time, if it first rings at 12:00?
(a) 12:00:44 (b) 12:01:28 (c) 12:00:22 (d) None of these

40 Which of the following is definitely not a perfect square?
(a) 7248 (b) 7744 (c) 3721 (d) 3969

41 Which of the following is definitely not a perfect cube?
(a) 32768 (b) 15648 (c) 110592 (d) 4913

42 The LCM of two numbers is 357 & their HCF is 17; what is the value of the other number if one of them is 119?
(a) 187 (b) 19 (c) 34 (d) 51

43 What is the highest power of 7 in 30! , such that the remainder obtained is zero.
(a)13 (b) 4 (c) 6 (d) None of these

44 What is the highest power of 8 in 98! , such that the remainder obtained is zero.
(a) 12 (b) 13 (c) 7 (d) None of these

45 Find the remainder obtained when $(8^4 + 2)$ divided by 7?
(a) 4 (b) 6 (c) 8 (d) 3

46 Find the remainder obtained when $(19^4 + 7)$ divided by 90?
(a) 6 (b) 1 (c) 8 (d) 7