**28/03/2020 ATHAVALE CLASSES**

**Time:- 45 min Continuity & Vectors Marks:-120**

1) If is continuous for all x, where ,then k= a) 7 b) – 7 c) ± 7 d) 14

2) If is continuous at x = 2, wherethen a = a) 2 b) – 2 c) 1 d) 0

3) If is continuous at x = 0, where then f (0) = a)  b)  c)  d) 

4) The function is a) discontinuous at only one point b) discontinuous at exactly two points c) discontinuous at exactly three points d) None of the above

5) If is continuous atwhere a) – 1 b) 1 c) 0 d) 2

6) The function at every is a) continuous on R+  b) continuous on R c) discontinuous R+ d) discontinuous on R

7) Value of so that is continuous at  is a) - 4 b) 1 c) 2 d) - 2

8) If is continuous in ( - ∞, 6 ), where a) a = 2, b = 0 b) a = 0, b = 2 c) a = 1 , b = 1 d) a = 2, b = 1

9) If is continuous at  where then k = a) 3 b) - 3 c) 6 d) – 6

10) If , then at x = 3, f’ (x) = a) – 1 b) 0 c) 1 d) does not exist

11) Let then f (x) is continuous but not differentiable at x = 0, if a)  b)  c)  d) 

12) If  is continuous function at x = 0, then the value of “a” is a) 3 b) 1 c) 2 d) 4

13) If  then the values of x which make the function y discontinuous are a)  b)  c)  d) 

14) If  is continuous at x = 2, then the n = a) 6 b) 7 c) 8 d) 3

15) If is continuous at x = 0, then the value of k is: a) 1 b) -2 c) 2 d)

16) f (x) =  in [ - 2, 2 ] is discontinuous at a) x = 0 b) x = 2 c) x =-2 d) x = 1

17)a and b = a)b)c)d) 18) If then : = a) 2 b) 0 c) 1 d) does not exist 19) =  for x  4

= k for x = 4 If f is continuous at x =4 then value of k is a) 340 b) 240 c) 250 d) 350 20)= , f is continuous at  then value of  is a)  b)  c) d) 

21) If is continuous at x = 7, then f (7) is a) b) c) d)

22) If is continuous at x = 0, iff f(0) is equal to a) log 3 b) (log 3)2 c)  d) e3 23) is continuous for

a)  b)  c) only x > 0 d) no value of x

24) The value of f (0) so that may be continuous at x = 0 is a)  b) 0 c) 4 d) -1 + log 2

25) Let and f(0) = 12. If f is continuous at x = 0, then the value of a is equal to = a) 1 b) – 1 c) 3 d) – 2

26) If continuous at x = 0, then k is equal to a) – 4 b) – 3 c) – 2 d) – 1

27) If is continuous at x = 0, then

a)  b)  c)  d) 

28) If is continuous in [0,1] and, then is equal to

a) 0 b)  c) 2 d) 1

29) The set of points of discontinuity of the function is

a) {0} b)  c) {1, -1} d) 

30) If , then the points of discontinuity of the function are a) {0} b) {0,1} c) {1, -1} d) 

31) The value of f(0), if is continuous at x = 0 is

a) b) c) d)

32)is a) discontinuous b) imaginary c) continuous d) not defined

33) The function is not defined at x = 2 In order to make f (x) continuous at x = 2, then value of f (2) should be defined as a) 3 b) 2 c) 1 d) 0

34) Let  for what value of a, f is continuous at x = 0? a) 2 b) 4 c) 6 d) 8

35) The value of f(0), so that the function is continuous everywhere, is a) 1/ 8 b) 1 / 2 c) 1/ 4 d) 0

36) If a, b, c and d are positive, then is equal to a)  b)  c)  d) e

37) is equal to a) e-1 b) e c) e2 d) 0

38) The value of then k is equal to a) 1/5 b) 1/6 c) 1/4 d) 1/2

39) The value of is a) e2 b) e-2 c) e6  d) 1

40) If is continuous at x = 0, then k is equal to a) – 2 b) 2 c) 1 d) – 1

41) The value of f(0), so that the functionbecomes continuous for all x, is given by a)  b)  c)  d) 

42) If the function is continuous at x = 2, then k is equal to a)  b) – 1 c) 0 d) 

43) If the function is continuous everywhere, then the values of c and k are respectively a) – 3, – 5 b) – 3, 5 c) – 3 , – 4 d) – 3 , 4

44) If given by is continuous function on R, then (a, b) is equal to a) (1/2, 1/2) b) (0, – 1) c) ( 0, 2) d) (1,0)

45) If is continuous at x = 0,then will be a) e15  b) e2 c) 15 d) 1

46) If then = a) 1 b) – 1 c) 0 d) 2

47) If and then the range of is a)  b)  c)  d) 

48) Let .If  is a unit vectors, then the maximum value of is a) 1 b)  c) d) 

49) Letbe three unit vectors such that .If is not parallel to , then the angle between is a)  b)  c)  d) 

50) The diagonals of a parallelogram are given by  then area is…a) sq. units b) sq. units c) sq. units d) 

51) If the vectors  lie in a plane, then c (for non-negative distinct number set of a, b, c) is … a) the arithmetic mean of a and b b) the geometric mean of a and b c) the harmonic mean of a and b d) equal to zero

52) If in a triangle ABC, where then the value of must be a) – 1 b) 0 c) 2 d) 

53) If are two vectors and  is a vectors such that then =…. a)  b)  c)  d) 

54) If are three non-coplanar vectors, then = a) 0 b)  c)  d) 

55) Let .If is a unit vector such thatand then =…. a) 0 b) 1 c) 2 d) 3

56) If and vectors  are non-coplanar, then the product abc = a) 2 b) – 1 c) 1 d)

57) Let be such that If the projection of  along  is equal to that of  along, andand  are perpendicular to each other, then= a) 2 b) c)  d) 14

58) Let  be non-zero vectors such that If is the acute angle between the vectors and then  a)  b)  c) d) 

59) ABC is a triangle, right angled at A. The resultant of the forces acting along andwith magnitudesrespectively, is the force along, where D is the foot of the perpendicular from A onto BC. The magnitude of the resultant is….

a) b)  c)  d) 

60) Let .Then the vectorsatisfying andis.. a)  b)  c)  d) 