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KCET ONLINE TEST-34, JUNE-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **2nd PU INTEGRATION, DIFFERENTIAL EQUESTIONS, VECTOR, 3D-GEOMETRY, PROBABILITY. DATE: 06/06/2020**

1. ***If , then ***

(a) constant (b) constant

(c) Constant (d) None of these

1. 

(a)  (b) 

(c) (d) None of these

1. *** equal to***

(a)  (b) 

(c)  (d) None of these

1. ***If  then the values of a and b are respectively***

(a) 1/2, 3/4 (b) –1, 3/2

(c) 1, 3/2 (d) –1/2, ¾

1. 

(a)  (b) 

(c) (d)

1. ****

(a)  (b) 

(c)  (d) 

1. ***If  is any integer, then ***

(a)  (b) 1

(c) 0 (d) None of these

1. 

(a)  (b) Zero

(c)  (d) 

1. ***Area bounded by the curve  and the straight line  is***

(a)  *sq. unit* (b)  *sq. unit*

(c)  *sq. unit* (d) None of these

1. ***The area of the region bounded by the curve , x-axis and the ordinates is given by***

(a) Zero (b) 

(c)  (d) 1

1. ***The differential equation of the family of curves for which the length of the normal is equal to a constant k, is given by***

(a)  (b) 

(c)  (d) 

1. ***The solution of the differential equation  is***

(a)  (b) 

(c)  (d) None of these

1. ***The solution of the differential equation is***

(a)  (b) 

(c)  (d) 

1. ***The order of the differential equation whose general solution is given by   is***

(a) 5 (b) 4

(c) 3 (d) 2

1. ***The solution of the equation  when ,  and  is***

(a)  (b) 

(c)  (d) 

1. ***If  and  then ***

(a)  (b) 

(c)  (d) 

1. ***A unit vector which is perpendicular to  and  is***

(a)  (b) 

(c)  (d) 

1. ***The area of triangle whose vertices are  and  is***

(a) 150 *sq*. *unit*  (b) 145 *sq*. *unit*

(c)  *sq*. *unit* (d)  *sq*. *unit*

1. ***The area of a parallelogram whose two adjacent sides are represented by the vector  and  is***

(a)  (b) 

(c)  (d) 

1. *** are coplanar, then the value of  is***

(a) 5/2 (b) 3/5

(c) 7/3 (d) None of these

1. ***The point of intersection of the lines   is***

(a)  (b) 

(c)  (d) 

1. ***The straight lines  and  are***

(a) Parallel lines (b) Intersecting at 

(c) Skew lines (d) Intersecting at right angle

1. ***The equation of the plane passing through the intersection of the planes  and  the point (1, 1, 1), is***

(a)  (b) 

(c)  (d) None of these

1. ***The equation of the plane through the three points (1, 1, 1), (1, –1, 1) and (–7,–3,–5), is***

(a)  (b) 

(c)  (d) None of these

1. ***The angle between the line  and the plane is***

(a)  (b) 

(c)  (d) 

1. ***A bag contains a white and b black balls. Two players A and B alternately draw a ball from the bag replacing the ball each time after the draw till one of them draws a white ball and wins the game. A begins the game. If the probability of A winning the game is three times that of B, then the ratio a : b is***

(a) 1 : 1 (b) 1 : 2

(c) 2 : 1 (d) None of these

1. ***If n positive integers are taken at random and multiplied together, the probability that the last digit of the product is 2, 4, 6 or 8, is***

(a)  (b) 

(c)  (d) None of these

1. ***In binomial probability distribution, mean is 3 and standard deviation is . Then the probability distribution is***

(a)  (b) 

(c)  (d) 

1. ***A box contains 24 identical balls, of which 12 are white and 12 are black. The balls are drawn at random from the box one at a time with replacement. The probability that a white ball is drawn for the 4th time on the 7th draw is***

(a)  (b) 

(c)  (d) 

1. ***The chance of an event happening is the square of the chance of a second event but the odds against the first are the cube of the odds against the second. The chances of the events are***

(a)  (b) 

(c)  (d) None of these