MASTER’S P.U COLLEGE, HASSAN, 573201.

KCET ONLINE TEST-29, MAY-2020  **MATHEMATICS**  **TIME: 45Mins MARKS: 30**

**TOPIC**: **PERMUTATIONS & COMBINATIONS, BINOMIAL THEOREM, AREAS . DATE: 27/05/2020**

1. **The value of  is**

(a)  (b) 

(c)  (d) None of these

1. **A question paper is divided into two parts A and B and each part contains 5 questions. The number of ways in which a candidate can answer 6 questions selecting at least two questions from each part is**

(a) 80 (b) 100

(c) 200 (d) None of these

1. **How many numbers lying between 10 and 1000 can be formed from the digits 1, 2, 3, 4, 5, 6, 7, 8, 9 (repetition is allowed)**

(a) 1024 (b) 810

(c) 2346 (d) None of these

1. **The number of ways in which the letters of the word TRIANGLE can be arranged such that two vowels do not occur together is**

(a) 1200 (b) 2400

(c) 14400 (d) None of these

1. **There are four balls of different colours and four boxes of colours same as those of the balls. The number of ways in which the balls, one in each box, could be placed such that a ball does not go to box of its own colour is**

(a) 8 (b) 7 (c) 9 (d) None of these

1. **If , then **

(a) 31 (b) 41 (c) 51 (d) None of these

1. **How many words can be made from the letters of the word BHARAT in which B and H never come together**

(a) 360 (b) 300 (c) 240 (d) 120

1. **There are 10 persons named . We have the capacity to accommodate only 5. In how many ways can we arrange them in a line if  is must and  and  must not be included in the team of 5**

(a)  (b)  (c)  (d) 

1. **The number of times the digit 5 will be written when listing the integers from 1 to 1000 is**

(a) 271 (b) 272

(c) 300 (d) None of these

1. **The exponent of 3 in  is**

(a) 33 (b) 44

(c) 48 (d) 52

1. **There are three girls in a class of 10 students. The number of different ways in which they can be seated in a row such that no two of the three girls are together is**

(a)  (b) 

(c)  (d) 

1. **For  is equal to**

(a)  (b) 

(c)  (d) 

1. **If the coefficient of the middle term in the expansion of is *p* and the coefficients of middle terms in the expansion of  are *q* and *r*, then**

(a)  (b) 

(c)  (d) 

1. **In the polynomial the coefficient of  is**

(a) 5050 (b) – 5050

(c) 100 (d) 99

1. **The coefficient of  in the expansion of  is**

(a)  (b) 

(c)  (d) 

1. **If the coefficient of  in  is equal to the coefficient of in , then *ab* =**

(a) 1 (b) 1/2

(c) 2 (d) 3

1. **If the coefficient of *x* in the expansion of  is 270, then *k* =**

(a) 1 (b) 2

(c) 3 (d) 4

1. **The term independent of *x* in is**

(a)  (b)  (c)  (d) None of these

1. **The largest term in the expansion of  where  is**

(a) 5th (b) 51st  (c) 7th (d) 6th

1. **If the sum of the coefficients in the expansion of  is equal to the sum of the coefficients**

**in the expansion of , then =**

(a) 0 (b) 1

(c) May be any real number (d) No such value exist

1. **For which of the following values of *m*, the area of the region bounded by the curve  and the line  equals**

(a)  (b) (c) 2 (d) 4

1. **Area enclosed between the curve  and line  above *x*-axis is**

(a)  (b)  (c)  (d) 

1. **What is the area bounded by the curves  and  is**

(a) 0 (b) 

(c)  (d) None of these

1. **The area bounded by the curves  and  is**

(a) 1 (b) 2 (c)  (d) 4

1. **The area between the parabola and  is**

(a)  (b)  (c)  (d) 

1. **The area of the region bounded by the curves  and  is**

(a) 1/6 (b) 1/3 (c) 5/6 (d) 5/3

1. **The area bounded by curves  and  and ordinates  and  is**

(a)  (b) 

(c)  (d) 

1. **The area in the first quadrant between  and  is**

(a) (b) 

(c)  (d) 