$P \geq 2/3$

2.27 $n = ?$

$-1.007 = \ln(n) \times 0.75$

-1.4

$(1.34)^n = 3$

$\ln n \times 1.039 = 1.09$

$n = e^{0.82}$

	SESSIONAL-I May 2023 Programme: BTech, Branch: CSE **Course Code: BTMAT119B, Course Title: Mathematics-II**	Semester: II Time: 1 Hour Max Marks: 20

Q1. The first four moments of distribution about the value 5 of the variable are 2, 20, 40 and 50. Obtain as far as possible the various characteristics of the distribution on the basis of the information given. **5 Marks**

Q2. The marks obtained by 10 students in Mathematics (X) and Statistics (Y) are given below. Find the rank correlation between X and Y **5 Marks**

Roll No.	1	2	3	4	5	6	7	8	9	10
X	75	30	60	80	53	35	15	40	38	48
Y	85	45	54	91	58	63	35	43	45	44

Q3. Let X be a random variable with the following probability distribution: **5 Marks**

x:	−3	6	9
P(X=x):	1/6	1/2	1/3

Evaluate $E(2X+1)^2$.

Q4. The probability of a man hitting a target is ¼; (i) If he fire 7 times, what is the probability of his hitting the target at least twice? (ii)How many times must he fire so that the probability of is hitting the target at least one is greater than 2/ 3. **5 Marks**

$P(x \geq 1) > 2/3$