TY-IT

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Oct 2018

Course: B. Tech in Third Year IT **Sem: III**

Subject Name: Probability & queuing Theory **Subject Code: BTITC504**

Max Marks: 20 **Date:-21/09/19** **Duration:- 1 Hr.**

Instructions to the Students:

1. All questions are compulsory
2. Assume suitable data whenever necessary

		(Level/CO)	Marks
			1X6
Q.1	1. The expected value of a random variable is it's a) Mean b) Standard Deviation c) Mean Deviation d) Variance	CO1	
	2 The mean of poison distribution is a) np b) npq c) n/p d) n^2	CO2	
	3.if X is random variable ,E(e^{tx}) is known as a. charectaristic Function b. moment generating Function c. probability function d.none of above	CO1	
	4. In a Binomial Distribution, the mean and variance are equal a) True b) False	CO2	
	5. Which of the following mentioned standard Probability density functions is applicable to discrete Random Variables ? a) Gaussian Distribution b) Poisson Distribution c) Rayleigh Distribution d) Exponential Distribution	CO2	
	6. Normal Distribution is also known as a) Cauchy's Distribution b) Laplacian Distribution c) Gaussian Distribution d) Lagrangian Distribution	CO2	
			3 X 2
Q.2	**Solve Any Two of the following.**		
(A)	Ten unbiased coins are tossed simultaneously. the probability of obtaining 1) Exactly six heads 2) not more than three heads 3) No Heads.	CO2	
(B)	Explain Multiplication theorem of probability	CO1	
(C)	Define statistical and empirical probability. State the Axioms of probability.	CO1	
			8x1
Q. 3	**Solve Any One of the following.**		
(A)	1. State the conditions under which PD is used . Between the hours 2PM and 4 PM the average number of phone calls per minute coming into the switch board of a compony is 2.35. Find the probability that during one particular minute there will be at most 2 phone calls Given $e^{-2.35}$=0.095374	CO2	

	2 If 5% of the electric bulbs manufactured by a compony are defective .Use PD to find the probability that in a sample of 100 bulbs a. None is defective b. 5 bulbs will be defective. (Given e^{-5} =0.007)		
(B)	Describe the terms a) Moment b) Binomial distribution c) Normal distribution d. Random variable	C01,2	
	***** End *****		