COMSATS University Islamabad
Department of Statistics
QUIZ 2

Course Title:	Statistics and Probability Theory			Course Code:	MTH262	3(3,0)
Name & Reg.					Max.Time: 60 Minutes	
Semester:	FA23	Batch: BCS-	Section:		Dated	
Instruction:	Present all necessary calculations.			Marks	30	

Q1.

Ali likes to play game on his android mobile, having good practice; he has improved his gaming ability a lot. If in a certain android game Ali has a probability of 0.45 to complete a game, then for next 10 games he will play,

    a) Develop an appropriate probability distribution for the number of times he will complete a game.

    b) Find the probability that not less than 3 games will be completed.

    c) Find the probability that from 6 to 8 games will be completed.

Q2.

The typing accuracy matters a lot for writing effectively and efficiently. A training workshop was arranged for beginners- level learners. If for this group of learners the probability of making typing mistake is 0.25 prior to this workshop. The find the probability that in a test before the workshop, for a randomly selected participant

    a) The 5th typing mistake would actually be the 20th word he typed.

    b) At least 8 words will be typed to have 5 typing mistakes.

    c) Not more 6 words will be typed to have 5 typing mistakes.

    d) 1st typing mistake will actually be made on 12th word he will type.

Q3.

A software engineer is struggling to remove a very rare bug in a program. On the average 3 such bugs may appear in 100 programs. For X be the number of bugs per 100 programs,

    a) Develop an appropriate probability distribution for X.

    b) Find the probability that for any 100 randomly selected programs, there will exist at least 3 such bugs.

    c) Find the probability for any 200 randomly selected programs, there will be exactly 10 such bugs.