



DOON UNIVERSITY, DEHRADUN
Mid-term Examination, First Semester, 2014
School of Social Sciences
MSc Economics
Course: SSEI 211- : ECONOMETRICS I

Time Allowed: 2 hrs.

Max. Marks: 30

Note: Attempt All Questions from Sections A,B,C.

SECTION : A

All questions are compulsory and carry equal marks.

Answer TRUE or FALSE

(Marks : 1 x 6 = 6)

1. The probability distribution is a theoretical model that assigns probabilities to the values of random variable.
2. Covariance between X and Y is a numerical measure of the joint variation of the two random variables.
3. The particular normal distribution that has a mean 0 and a standard deviation of 1 is called the standard normal distribution.
4. Normal distribution is a continuous probability distribution.
5. The total area under the probability density curve is 1.
6. Decreasing σ increases the height and concentration of probability around μ in a normal distribution.

SECTION : B

Answer any THREE.

(Marks: 3 x 4 = 12)

Identify which probability distribution is applicable in the following cases and why?

1. The probability of a man hitting the target is 0.25. If he fires 7 times, what is the probability of his hitting the target at least twice.
2. In a research project we conduct a series of experiments in a defined sequence. The next experiment in series can be performed only if the previous one is a success. The experiments are independent. The probability of success is 92% or 0.92. Find the probability that the project is abandoned after sixth experiment.
3. A player is playing on a slot machine. It costs Rs. 100 to play once. Probability of losing is 0.5. A player decides to stop playing after losing fifth time. Find the probability that the player plays exactly 12 times.
4. A police department receives an average of 5 calls per hour. Find the probability of receiving 2 calls in a randomly selected hour.

SECTION : C

Answer any ONE.

(Marks: 1x12 = 12)

1. What are the stages in an econometric research? Elaborate with the example of consumption function.

2. Suppose we have the data on the heights of students in Doon University with mean (μ) of 1.65 m and standard deviation (σ) of 0.20 m. Find the probability that the height of all the students is ≤ 1.75 m.

Area between $(.00 \leq z \leq .10) = .0398$

Area between $(.00 \leq z \leq .20) = .0793$

Area between $(.00 \leq z \leq .30) = .1179$

Area between $(.00 \leq z \leq .40) = .1554$

Area between $(.00 \leq z \leq .50) = .1915$

Area between $(.00 \leq z \leq .60) = .2257$

Area between $(.00 \leq z \leq .70) = .2580$

Area between $(.00 \leq z \leq .80) = .2881$

Area between $(.00 \leq z \leq .90) = .3159$