

ALLAMA IQBAL OPEN UNIVERSITY

Level: Bachelor
Paper: Business Statistics (133)
Time Allowed: 03hrs

Semester: Spring 2009
Maximum Marks: 100
Pass Marks: 40

Note:- ATTEMPT FIVE QUESTIONS. ALL CARRY EQUAL MARKS.

Q. No. 1. Calculate the mean, median, variance, standard deviation and range for each of the following sets: (20)

- i) 3, 6, 2, 5, 4
- ii) 12, 14, 18, 15, 12
- iii) 1, 3, 1, 1, 5
- iv) -2, 1, -1, 0, 3, 2, -1

Q.No.2. (i) A letter is chosen at random from the word STATISTICIAN. (20)

- a. What is the probability that it is a A?
- b. What is the conditional probability of T?

(ii). A three-digit number is formed by arranging the digits 1, 4, and 7 in a random order.

- a. List the sample space.
- b. Find the probability of getting a number larger than 500.
- c. What is the probability that an even number is obtained?

Q.No.3. The heights of men in the republic of Mauritania are normally distributed with a mean of 167cm and a standard deviation of 4cm. (20)

(i). What proportion of them have heights.

- a. Over 172 cm?
- b. Between 172 – 173 cm?
- c. Between 165 – 173 cm?
- d. Between 167 – 173 cm?
- e. Between 150 – 170 cm?

(ii). Within what range would 90 percent of the heights lie.

Q. No. 4. (i) Explain the concept of probability distribution, its mean and variance with a suitable example. (10)

(ii) When two dice are thrown, let X be the larger of the two numbers on the two throws. Find the probability distribution, mean and variance of X. (10)

Q. No.5. (a) Describe the concept of level of significance and confidence interval by giving at least one example

(b) A sample of 300 employs was interviewed for opinions on their attitude concerning a new bonus plan being proposed by the management. The results, summarized separately for males and females, showed that 52