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MBA 1st Semester Examination 2019

Subject: Quantitative Methods

Paper Code: MBA - FG – 108

TIME: 3 hrs

MM: 75

All questions carry equal marks.

Attempt any FIVE questions.

Q.1 Find the Population Mean, Population Standard Deviation and Population variance for the following data.

47 58 28 43 93

33 61 27 77 83

56 70 38 53 27

24 42 50 57 89

82 27 58 37 67

Q.2 What do you mean by Probability of Occurrence of an event? Explain different methods of assigning probability with the help of an example.

Q.3 Solve the following problems by using the Poisson formula. ($e=2.7183$)

i) $P(4 \leq x < 9)$, and $\lambda=4.4$

ii) $P(x \leq 7)$, and $\lambda=3$

Q.4 Two unbiased dice are thrown based on this, find:

- a) Sample Space
- b) Probability of getting doubles
- c) Probability of getting even numbers
- d) Probability of not getting a multiple of 3
- e) Probability of getting the sum ≤ 10

Q.5 What is time series analysis? Why time series analysis is important in an organisation?

Q.6 Test the following sequence of observations by using the run test to determine whether the process produced random results. It is given that confidence interval is 95%. Use ($Z_{.05}=\pm 1.96$)

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Q.7 Use the data given to test the following hypothesis, assume the population is normally distributed: (Use $Z_{.01}=2.575$ and $Z_{.05}=1.64$)

a) $H_0: \mu=25$ $H_1: \mu \neq 25$

(Sample Mean=28.1, $n=57$, $s^2=16.52$, $\alpha=.01$)

b) $H_0: \mu$ is less than 6300 $H_1: \mu$ is not less than 6300

(Sample Mean=8801, $n=100$, population standard deviation=400, Confidence Interval=95%)

Q:8 A store wants to liquidate 200 of its shirts and 100 pairs of pants from last season. They have decided to put together two offers, A and B. Offer A is a package of one shirt and a pair of pants which will sell for \$30. Offer B is a package of three shirts and a pair of pants, which will sell for \$50. The store does not want to sell less than 20 packages of offer A and less than 10 of offer B. How many packages of each do they have to sell to maximise the money generated from the promotion.