Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIRST TRIMESTER MBA DEGREE EXAMINATION(R&S), NOVEMBER 2019

Course Code: 11

Course Name: : QUANTITATIVE TECHNIQUES

Max. Marks: 60 Duration: 3 Hours

PART A

Answer all questions. Each question carries 2 marks. Marks

1 "*Tables and charts help present dry and uninteresting statistical facts in the shape of attractive and appealing pictures*." Comment. (2)

2 Find the probability of drawing an ace or a spade from a pack of cards. (2)

3 In a frequency distribution, mean is 30 and median is 27. Find the mode. (2)

4 Elucidate degrees of freedom. How is it calculated for a contingency table. (2)

5 Distinguish between population and sample. (2)

PART B

Answer any three questions. Each question carries 10 marks.

6 The manufacturer of compact disc players wants to test whether a small price reduction is enough to increase the sales of their product. Randomly chosen data on 15 weekly sales total at outlets in a given area before the price reduction show a sample mean of `6598 and a sample standard deviation of `844. A random sample of 12 weekly sales after the small price reduction gives a sample mean of `6870 and a sample standard deviation of `669. Is there evidence that the small price reduction is enough to increase sales of compact disk players? Take $\alpha = 0.05$. (10)

7 What is Sampling? Critically examine the well-known methods of probability and non-probability sampling? (10)

8 A behavioural scientist is conducting a survey to determine if the financial benefits, in terms of salary, influence the level of satisfaction of employees, or whether there are other factors such as work environment which are more important than salary in influencing employee satisfaction. A random sample of 300 employees is given a test to determine their level of satisfaction. Their salary levels are also recorded. The information is tabulated below. (10)

Level of Satisfaction	***Annual Salary (Rs. Lakhs)***			
	Up to 5	***5-10***	***More than 10***	***Total***
High	10	10	10	**30**
Medium	50	45	15	**110**
Low	40	15	5	**60**
Total	**100**	**70**	**30**	**200**

At 5% level of significance, determine whether the level of employee satisfaction is influenced by salary level?

9 If P(A) = 1/13 , P(B) = ¼ , P(A∩B)= 1/52 , find a) P(A/B) b) P(B/A). (10)

10 (a) Write notes on measures of central tendency. (5)

(b) The arithmetic mean of marks in English for 100 students was found to be 45. It was later found out that a mark 50 of a student was misread as 15. Find the mean after correction. (5)

PART C

Compulsory Question. The question carries 20 marks.

11 Compute the two Regression equations on the basis of the following information: Also find the coefficient of correlation. (20)

X	60	62	65	70	72	48	53	73	65	82
Y	68	60	62	80	85	40	52	62	60	81

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