Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

First Semester MBA Degree Examination March 2021 (2020 scheme)

Course Code: 20MBA103
Course Name: QUANTITATIVE TECHNIQUES FOR MANAGERS

Max. Marks: 60   Duration: 3 Hours

PART A
Answer all questions. Each question carries 2 marks   Marks

1	In a moderately asymmetrical distribution, the value of mean is 75 and value of mode is 60. Find the value of median.	(2)
2	State addition theorem of probability.	(2)
3	Mention the errors in testing of hypothesis.	(2)
4	Define cyclical variations.	(2)
5	Distinguish between correlation and regression.	(2)

PART B
Answer any 3 questions. Each question carries 10 marks

6   During the 10 weeks of a session the marks obtained by two candidates Ramesh and Suresh taking the computer program course are given below: (10)

(a) Who is the better Scorer (b) Who is the more consistent performer

Ramesh	58	59	60	54	65	66	52	75	69	52
Suresh	87	89	78	71	73	84	65	66	56	46

7   The daily wages of 1000 workmen are normally distributed around a mean of Rs. 70 and with SD of Rs. 5. Estimate the number of workers whose daily wages will be (1) between Rs.70 and Rs.72 (2) Between Rs.69 and Rs. 72 (3) Less than Rs. 63 (4) More than Rs. 80   (10)

8   An IQ test was administered to 5 persons before and after they were trained. The results are given below. Test whether there is any change in IQ after the training (Level of significance 1%)   (10)

Candidates	1	2	3	4	5
IQ before training	110	120	123	132	125
IQ after training	120	118	125	136	121

9   Discuss the importance of time series analysis in Business. Explain different components of time series. Give examples for each component   (10)

10   Calculate Spearman's coefficient of rank correlation for the following data   (10)

X	57	16	24	65	16	16	9	40	48	33
Y	19	6	9	20	4	15	6	24	13	13

PART C
Compulsory question carrying 20 marks

11 a) A panel of judges A and B graded seven debaters and independently awarded the following marks: (10)

Debater	1	2	3	4	5	6	7
Judge A	40	34	28	30	44	38	31
Judge B	32	39	26	30	38	34	28

An eighth debater was awarded 36 marks by Judge A while Judge B was not present. If Judge B was also present, How many marks would you expect him to award to eighth debater assuming same degree of relationship exists in judgement

b) A trucking company wishes to test the average life of each of the four brands of tyres. The company uses all brands on randomly selected trucks. The records showing the lives (thousands of miles) of tyres are given below. Test the hypothesis that the average life for each brand of tyres is the same (α =0.01)   (10)

Brand 1	Brand 2	Brand 3	Brand 4
20	19	21	15
23	15	19	17
18	17	20	16
17	20	17	18
	16	16	

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