CMR INSTITUTE OF TECHNOLOGY	USN											CMR

<p style="text-align:center">Internal Assessment Test - I</p>

Sub:	**BUSINESS STATISTICS AND ANALYTICS**			Code:	**18MBA14**
Date:	**06-09-2019**	Duration:	90 mins	Max Marks: 50	Sem: I	Branch: MBA

		Marks	OBE CO	RBT
	Part A -Answer Any Two Full Questions (20*02=40 Marks)			

1(a) From the following data, find the average marks secured by a student by the appropriate method: **[03] CO1 L2**

Roll No	1	2	3	4	5	6	7	8
Marks	65	80	100	102	108	110	112	113
Roll No	9	10	11	12	13	14	15	
Marks	115	124	128	143	180	160	151	

(b) In the Punjab University there are 25 Professors , 75 Readers and 200 Lecturers. Their monthly average salaries are Rs.12000, Rs.6000 and Rs.3000 respectively. After 5 years it is expected that each lecturer will become a reader and each reader a professor. Assuming no turnover of these employees find the excess salaries that will be drawn on an average by these employees after 5 years   **[07] CO2 L4**

(c) From the following data determine the Value of Median, Q1, Q2, Q3   **[10] CO5 L2**

Class Values	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30
Frequency	5	426	720	741	665	395	38	8	5	7

2(a) From the following data, find the frequencies of the various values of the variable.   **[03] CO2 L2**

Roll No	1	2	3	4	5	6	7	8	9	10
Marks	15	25	30	15	40	30	15	10	45	30
Roll No	11	12	13	14	15	16	17	18	19	20
Marks	40	20	15	25	35	20	25	40	35	45
Roll No	21	22	23	24	25	26	27	28	29	30
Marks	25	35	20	15	30	10	40	45	15	10

(b) Calculate the Standard Deviation, and its co-efficient from the following set of data by all the possible methods: **[07] CO2 L3**

X :	12	10	19	8	11	5	15	23	9	8

(c) Find the missing frequencies of the following series, if the arithmetic average is 39.5 and the total number of item is 100:   **[10] CO2 L3**

Marks :	0-10	10-20	20-30	30-40	40-50	50-60	60-70
F:	5	10	?	4	20	3	?

3(a)	From the following data, ascertain the average speed in miles per hour of a scooter:
	
	        Total distance covered= 200 miles.
	
	        60miles covered at a speed of 40 miles per hour.
	
	        40miles covered at a speed of 30 miles per hour.
	
	        50miles covered at a speed of 60 miles per hour.
	
	        45miles covered at a speed of 50 miles per hour.
	
	        10minutes running at a speed of 30 miles per hour.
		[05]	CO2	L3

(b)	The mean of marks in Statistics of 100 students in a class was 72. The mean of marks of boys was 75, while their number was 70. Find out the mean marks of girls in the class.	[05]	CO1	L3
(c)	From the data given below, locate the Value of the Mode by all possible methods	[10]	CO3	L3

Marks :	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45
No. of Students	5	6	15	10	5	4	2	2

Part B - Compulsory (01*10=10marks)

4 (a)	Compute the Standard Deviation, co-efficient of Variation by all the possible method from the following observations:	[10]	CO5	L3

Age :	50-60	40-50	30-40	20-30	10-20	0-10
No. of Employees :	25	30	40	45	80	110

	Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1:	To make the students learn about the applications of statistical tools and techniques in decision making.	1.a,3b				
CO2:	To emphasize the need for statistics and decision models in solving business problems.	1b,2a,b, c,3a				
CO3:	To enhance the knowledge on descriptive and inferential statistics.	1c,3c				
CO4:	To familiarize the students with analytical package MS Excel.					
CO5:	To develop analytical skills in students in order to comprehend and practice data analysis at different levels.	1c,4a				

Cognitive level	KEYWORDS
L1	list, define, tell, describe, recite, recall, identify, show, label, tabulate, quote, name, who, when, where, etc.
L2	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss
L3	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify
L4	classify, outline, break down, categorize, analyze, diagram, illustrate, infer, select
L5	grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate
L6	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate

PO1–*Theoretical Knowledge;* **PO2–***Effective Communication Skills;* **PO3–***Leadership Qualities;* **PO4 –***Sustained Research Orientation;* **PO5 –***Self-Sustaining Entrepreneurship*

CCI   HOD