Roll No. .....

12004

MBA 2 Yr. 1st Semester (CBCS) Examination – December, 2017

QUANTITATIVE ANALYSIS

Paper : 16IMG21C4

Time : Three Hours] *[Maximum Marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Section-**A** is ***compulsory***. Attempt ***one*** question from each unit in Section-**B**. All questions carry equal marks.

SECTION – A

1. (a) Distinguish between negative correlation and positive correlation.

(b) What do you mean by Central-Tendency?

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(c) What is Spearman's Rank Correlation Coefficient ? Discuss its utility.

(d) What is Lorenz Curve ?

(e) What is null hypothesis ? Give example.

(f) State the difference between correlation and regression.

(g) Why forecasting is desirable ?

(h) Differentiate between dispersion and skewness.

SECTION – B

UNIT – I

2. The table below gives a frequency distribution of the marks obtained in English by 1000 successful candidates at a recruitment test conducted by an Insurance Company :

Marks in English X :	50	51	52	53	54	55	56	57	58	59	60	61
No. of candidates f :	16	93	181	196	163	120	83	56	38	16	17	11

Using the above data, calculate the mean and standard deviation in respect of variable X.

3. 'Fluctuations in daily sales of two products X and Y are given below. Find out which of the two shows greater fluctuations in sales :

Daily Sales of Product X :	620	624	622	625	622	618	619	616	623	625	626	625	624
Daily Sales of Product Y :	2152	2134	2132	2145	2132	2142	2146	2130	2146	2142	2150	2135	2152

UNIT – II

4. From the data given in the following table

i. Calculate the coefficient of correlation between X and Y.

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ii. Find the equation of regression line of Y on X and estimate the value of Y when X=3.

iii. Find the equation of regression line of X on Y and estimate the value of X when Y=5.

X :	2	3	4	5	6	7	8	9	10	11
Y :	6	6	8	5	8	8	7	9	9	10

5. The Principal of a school wanted to study relationship between the marks obtained by the students in a school preliminary examination and that in the SSC Board examination. For this purpose, ten students were selected randomly and their percentage marks scored in two examinations are given below :

% marks-Preliminary Exam :	84	76	38	69	54	75	45	89	50	60
% marks-SSC Examination :	80	64	38	48	55	68	43	86	48	50

Find the linear relationship connecting the percentage marks in School Preliminary examination and percentage marks in SSC examination and the coefficient of correlation between them.

UNIT – III

6. (a) State and Prove the theorems of Probability.

(b) A class consists of 100 students. Out of these 25 are girls and 75 are boys. 10 of them are rich and remaining poor.20 of them are fair complexioned. What is the probability of selecting a fair complexioned rich girl?

7. As a result of tests on 20000 electric bulbs manufactured by a company, it was found that the lifetime of a bulb was normally distributed with an average life of 2040 hours and the standard deviation of 60 hours. On the basis of the information, estimate the number of bulbs that is expected to burn for (i) more than 2150 hours, and (ii) less than 1960 hours.

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UNIT – IV

8. The following table gives the number of refrigerators sold by 4 salesmen in three months May, June and July :

	Salesman			
	A	B	C	D
Month				
May	50	40	48	39
June	46	48	50	45
July	39	44	40	39

Is there a significant difference in the sales made by the four salesmen ? Is there a significant difference in the sales made during different months ?

9. A marketing agency gives the following information about the age groups or the sample informants and their liking for a particular model of scooter which a company plans to introduce :

Choice	*Age Group of Informants*			
	Below 20	**20-39**	**40-59**	**Total**
Liked	125	420	60	605
Disliked	75	220	100	395
Total	200	640	160	1,000

On the basis of above data, can it be concluded that the model appeal is independent of the age group of the informants ?

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