SEMESTER EXAMINATION-2021
CLASS – MBA SUBJECT
PAPER CODE: MBA C105 Quantitative Methods

Time: 3 hour **Max. Marks: 70**

Min. Pass: 40%

Note: Question Paper is divided into two sections: **A and B.** Attempt both the sections as per given instructions.

SECTION-A (SHORT ANSWER TYPE QUESTIONS)

Instructions: Answer any five questions in about 150 words each. Each question carries six marks. (5 X 6 = 30 Marks)

Question-1: Define A) Mean B) Correlation C) RegressionD) Standard Deviation Give formulas also.
Question-2: Discuss the Application of Quantitative Techniques in business management.
Question-3: Explain the Scope and Limitations of Quantitative Techniques.
Question-4: What are favourable cases and Mutually Exclusive events.
Question-5: Discuss the Addition Theorem of probability.
Question-6: Explain a) Random experiment b) Trial and Events
Question-7: Discuss the merits and Demerits of Median and Mode.
Question-8: *Calculate the mean and standard deviation from the following data* :

Value :*90—99 80—89 70—79 60—69 50—59 40—49 30—39*

Frequency : *2 12 22 20 14 4 1*

Question-9:Discuss and give all types of Skewness with diagrams. Explain Kurtosis.
Question-10: What is Correlation? Draw Scatter plot for Negative and Non linear Correlation.

SECTION-B (LONG ANSWER TYPE QUESTIONS)

Instructions: Answer any FOUR questions in detail. Each question carries 10 marks. (4 X 10 = 40 Marks)

Question-11: Explain the concept of Normal Distribution with Diagrams.
Question-12:*The prices of a commodity during 2001—2006 are given below. Fit a parabola Y = a + bX + cX2 to these data. Estimate the price for the year 2007 :*

Year (X) : 2001 2002 ***2003 2004*** *2005 2006*
*Price (Rs.) (Y) :*100 107 128 140 181 192

Question-13: Explain the properties and importance of Binomial and Poisson Distribution.
Question-14: Explain the concept of Hypothesis Testing. What is t Test , ANOVA and Z test explain.
Question-15: Discuss the concept of Time series Analysis and give all its components. What are the different types of Time series models?
Question-16: Prove that :
The probability of occurrence of atleast one of the two events A and B is given by :
P(A U B): P (A) + P(B)- P (A ∩ B)

Question-17: *From the following data, obtain the two regression equations* :

Sales X: 91 97 108 121 67 124 51 73 111 57

Purchases Y : 71 75 69 97 70 91 39 61 80 47

Question-18: A committee of 4 persons is to be appointed from 3 officers of production , 4 officers of

purchase, 2 officers of sales and 1 CA. Find the probability of forming a committee in the following manner:

A) There must be one person from each category.

B) It should have **atleast**one from the purchase department.

C) The CA must be in the committee

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