Roll No. | | | | | | | | | | | | | **Total No. of Pages : 03**

Total No. of Questions : 15

MBA/ MBA(IB) (2012 & Onward) (Sem.–1)

QUANTITATIVE TECHNIQUES

Subject Code : MBA-104

Paper ID : [C0104]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A contains SIX questions carrying FIVE marks each and students has to attempt any FOUR questions.**
2. **SECTIONS-B consists of FOUR UNITs : Units-I, II, III & IV. Each UNIT contains TWO questions each carrying EIGHT marks each and student has to attempt any ONE question from each UNIT.**
3. **SECTION-C is COMPULSORY and consists of ONE Case Study carrying EIGHT marks.**

SECTION-A

1) Discuss the importance and limitations of statistics.

2) What is non-probability sampling'? Give its advantages and disadvantages.

3) Using an example, explain the use of *z* test.

4) What is regression analysis? Explain the difference between correlation and regression analysis.

5) What is time series analysis? Explain its components.

6) Explain addition theorem of probability using examples.

SECTION-B

UNIT I

7) Why is arithmetic mean preferred over median as a measure of central tendency? What is the relationship between arithmetic mean and geometric mean?

8) Calculate an appropriate measure of skewness from the following data :

Value in Rs.	Frequency
Less than 50	40
50-100	80
100-150	130
150-200	60
200 and above	30

UNIT-II

9) What is the difference between census and a sample? Discuss simple random sampling procedure.

10) Nine candidates were imparted training and their performance was recorded once before and then after the training program Test at 5% level, whether the training program was effective.

Trainee	Before training	After training
1	75	70
2	70	77
3	46	57
4	68	60
5	68	79
6	43	64
7	55	55
8	68	77
9	77	76

UNIT-III

11) Take a suitable example to explain Karl Pearson's methods of computing correlation coefficient.

12) Calculate quantity index for 2006 with 2000 as base using :
a) Laspeyre's method
b) Paasche's formula

Commodity	Quantity	Units	Value in Rs.	
	2000 (q_0)	2006 (q_1)	2000 (p_0q_0)	2006 (p_1q_1)
1	100	150	500	900
2	80	100	320	500
3	60	72	150	360
4	30	33	360	297

UNIT-IV

13) Explain the least squares method of trend analysis.

14) What is binomial distribution? Explain its properties.

SECTION-C

15) **Case Study**

Titan diversified into jewelry in 1995 under the brand name Tanishq It has established some new rules in the jewelry market over the last ten years. In these years, the brand has consistently delivers real value to customers in product quality, retail experience and consumer aspiration Inspired by its success, it recently launched new jewelry designs for working women. Past records indicate that mean sales of this brand from various showrooms is Rs 20 million. If the distribution of sales is normal with standard deviation of Rs 50000. what is the probability of obtaining sales.

a. Greater than Rs. 35 million.

b. Between Rs. 15 to Rs. 25 million.