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G.L. Bajaj Institute of Management & Research

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POST GRADUATE DIPLOMA IN MANAGEMENT (2017-19) MID TERM EXAMINATION (TERM-I)

Paper Name: **Quantitative Techniques in Management**
Paper Code: **PG-04**

Time: **90 Minutes**
Max Marks: **20**

Note:

1. Writing anything except Roll Number on question paper will be deemed as an act of indulging in unfair means and action shall be taken as per rules.
2. All questions are compulsory in Section A, B & C. Section A carries 1 Case Study, 8marks, Section B carries 3 questions of 2 marks each and Section C carries 2 questions 3 marks each.

SECTION A

8 Marks

1. Case Study:

An investor has Rs 5,00,000 to invest. He decides to invest in shares of various companies. The amount of money that he proposes to invest and the corresponding return is given below:

| Name of the company | Amount to be invested (Rs) | Expected rate of return (%) |
|-----------------------|----------------------------|-----------------------------|
| TCS | 1,25,000 | 15 |
| RIL | 75,000 | 20 |
| State Bank of India | 2,00,000 | 10 |
| Cipla pharmaceuticals | 1,00,000 | 25 |

- a) What is Weighted Average Return (weighted arithmetic mean) that investor should expect by investing all his money?
- b) Find out the Arithmetic Mean of the expected return?
- c) Why is arithmetic mean different from weighted mean from the above data? Explain.

SECTION B

6 Marks

2. a) Three Different beverages are sold at a fast-food restaurant- soft drinks, tea, and coffee. Explain why the type of beverage sold is an example of a categorical variable?
b) Suppose that you measure the time it takes to download an MP3 file from internet. Explain why download time is a continuous data?
3. What is the difference between descriptive statistics and inferential statistics?
4. a) Why would you construct a summary table?
b) Why is it said that the main features of the Pareto chart are its ability to separate the “vital few” from the “trivial many”? Discuss.

SECTION C

6 Marks

5. The following set of data is from a sample $n=7$

12 7 4 9 0 7 3

Compute the Z score. Are there any outliers?

6. The net profit of Raunaq Auto Ltd for the last five years are given as under

| Year | Net Profit (Rs) |
|------|-----------------|
| 2013 | 120 |
| 2014 | 200 |
| 2015 | 245 |
| 2016 | 180 |
| 2017 | 150 |

Find out the geometric mean of the growth rate in net profit over the last five years.