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| Course Code<br><b>MCO – 09</b> |
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**Term End Examination - December, 2019**RESEARCH METHODOLOGY AND  
STATISTICAL ANALYSIS

Master of Commerce (MCOM)

*Time* : 3 hours*Full Marks* : 100*The figures in the right-hand margin indicate marks*Answer **all** Groups as directed

## Group—A

**1.** Fill in the blanks choosing the appropriate words : 1×10=10

(a) \_\_\_\_\_ is a systematic endeavour to discover answers to questions.

(b) A problem exists when we do not have enough \_\_\_\_\_ to answer it.

(c) If the sample does not represent the population characteristics, we call it a \_\_\_\_\_ sample.

(d) As the sample size increases, the sampling error \_\_\_\_\_.

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- (e) The information known on a particular subject matter is little. Hence, a \_\_\_\_\_ study is conducted to know more about it.
- (f) The process of reasoning whereby we arrive at generalizations from given facts is called \_\_\_\_\_.
- (g) Questionnaire is a device used for collection of \_\_\_\_\_ data.
- (h) \_\_\_\_\_ is the difference between the highest and the lowest value of observations.
- (i) A variable that can take only certain values, not fractional values, is called \_\_\_\_\_.
- (j) The middle item of a series arranged in ascending or descending order of magnitude is called \_\_\_\_\_.

Group—B

2. Answer any *four* questions each within 100 words :  $5 \times 4 = 20$

- (a) What are the different areas of business research?

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- (f) Explain *any two* of the following using suitable examples :
- (i) Equally likely events
- (ii) Mutually exclusive events
- (iii) Trial and event
- (iv) Sample space.

Group—D

4. Answer any *two* questions each within 300 words :  $15 \times 2 = 30$

- (a) Define binomial probability distribution. State the conditions under which the binomial probability model is appropriate.
- (b) What is meant by interpretation of statistical data? What precautions should be taken while interpreting the data?
- (c) What is report? What are the characteristics of a good report? Briefly explain the structure of a report.

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(f) Find out the Arithmetic Mean, Geometric Mean and Harmonic mean of 4, 5, 10 and 11. Verify the relationship among them.

Group—C

3. Answer any *four* questions each within 200 words :  $10 \times 4 = 40$

(a) Distinguish between Correlation and Regression.

(b) Briefly explain about various methods of construction of indices.

(c) Why Fisher's Index Number is considered as an ideal index?

(d) Define 'Time Series'. How analysis of time series is useful?

(e) Write notes on *any two* the following :

(i) Scatter Diagram

(ii) Coefficient of correlation

(iii) Regression Equations

(iv) Standard Error of Estimate.

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(b) Briefly explain the different methods of research.

(c) Distinguish between *any two* of the following.

(i) Primary data and Secondary data

(ii) Qualitative data and Quantitative data

(iii) Theoretical Analysis and Empirical Analysis

(iv) Schedule and Questionnaire.

(d) List out all the various methods of sampling.

(e) Prepare a Simple Bar Diagram from the following data relating to Tea Exports:

| Year                     | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|--------------------------|---------|---------|---------|---------|
| Exports (in Millions kg) | 167     | 209     | 410     | 316     |
|                          | 2013-14 | 2014-15 | 2015-16 |         |
|                          | 192     | 215     | 160     |         |