

### SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 "Each type of average has its particular usefulness". Examine mean, median, mode, geometric mean and harmonic mean in the light of above statement.
- Q.4 What is standard deviation? Give its merits and demerits.
- Q.5 Define probability and explain the importance of this concept in statistics.
- Q.6 What is secular trend? Critically examine various methods of measuring.
- Q.7 Explain the difference between correlation and regression analysis.

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**2nd Sem. / IPM**

**Subject : Business Mathematics & Statistics**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1 a) Define exponential equation.  
b) What is linear equation.  
c) What is Median?  
d) Define Harmonic mean.  
e) Give the formula for calculating mean in discrete series.  
f) Define Dispersion.  
g) Define Range.  
h) What is Standard Deviation?  
i) What do you mean by Time series?

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- j) Define Simple Random sampling.
- k) What are the equally likely events?
- l) Define dependent event.
- m) What is Secular trend?
- n) Define cluster sampling.
- o) Two components of time series.
- p) Write two merits of average.
- q) Give the meaning of central tendency.
- r) Calculating the mode of following data:-  
7, 8, 9, 6, 5, 7, 8, 7

### SECTION-B

**Note:** Short answer type questions. Attempt any ten parts

10x4=40

- Q.2
- i) What are the essential of good average?
  - ii) What are the demerits of Median?
  - iii) What are the features of an ideal measure of dispersion?

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- iv) What are the merits of mean deviation?
- v) Write a short note on "Seasonal variation" in time series.
- vi) What are the components of time series?
- vii) What are the importances of 1st degree equation in business application?
- viii) Define the coefficient of variation?
- ix) What are the merits of stratified random sampling method?
- x) What do you mean by the term "Probability".
- xi) Give the use of Harmonic mean.
- xii) Write a short note on Simple and Compound Events.
- xiii) What are the importances of quadratic equation.
- xiv) Discuss the utilities of correlation.
- xv) Find the Median from the following data.  
10, 12, 14 16, 15, 9, 13, 17, 20

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