

**Code: 9EBS105**

MBA &amp; MBA (Finance) I Semester Regular &amp; Supplementary Examinations December/January 2015/2016

**STATISTICAL METHODS FOR MANAGEMENT**

(For students admitted in 2011, 2012, 2013, 2014 &amp; 2015)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions  
All questions carry equal marks

\*\*\*\*\*

- 1 What are the various types of data? How is data collected? Why is data classified and tabulated?
- 2 Why are samples taken? Explain the various sampling techniques used with examples.
- 3 The sales of a firm over a 10 month period in Rs. Crores is given below:  
33, 45, 44, 35, 47, 45, 34, 37, 38, 40  
What is the average, the median, the quartile deviation, the range, the standard deviation and the coefficient of variation of sales over 10 years?
- 4 Five contestants are ranked in a cooking contest by two judges. Compute the rank correlation of ranks given by the judges. Are the ranks similar by both judges?

	C1	C2	C3	C4	C5
J1	1	2	5	4	3
J2	2	1	4	5	3
- 5 What is the use of regression in business? What are the prerequisites for applying regression? How is accuracy of regression measured? How is regression accuracy related to correlation coefficient? What is the use of multiple regressions? How is it different from simple regression?
- 6 Five boys and three girls come for a certain interview. If two are picked in random, what is the probability that both are girls? If one is definitely a girl, then what is the probability that the other is a boy? What are the chances that at least one is a boy?
- 7 (a) Discuss the importance of normal distribution.  
(b) Find the first two derivatives of the following functions:  
(i)  $y = 5x^4 + 6x^2 + 3$ . (ii)  $y = 6x^2 + 8x + 9$ .
- 8 A certain product's demand is a function of advertising levels as given by the function below:  
 $D = 5000 + 20000x - 0.2x^2$   
Find the elasticity function of demand. What is the elasticity of demand at a production level of 250 units?

\*\*\*\*\*