



PG – 123

I Semester M.B.A. (Day) Degree Examination, February 2012  
(2007-08 Scheme)  
MANAGEMENT  
Paper – 1.5 : Bumastics

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **any six** of the following. **Each** question carries **two** marks. (2×6=12)

1. a) What are transposed determinants ?
- b) What do you mean by uncertainty risk in decision tree ?
- c) Define snow ball sampling.
- d) What is difference between colinear and cojoint variable ?
- e) What do you mean by lag correlation ?
- f) Define Bay's Theorem.
- g) Differentiate between level of significance and confidence intervals.
- h) Define Anova.

SECTION – B

Answer **any three** of the following. **Each** question carries **eight** marks. (3×8=24)

2. Differentiate between parametric and non parametric test.
3. Urn – 1 contains, 5 red and 5 black balls, urn – 2 contains 4 red and 8 black balls and urn – 3 contains 3 red and 6 black balls. One urn is chosen at random and a ball is drawn. The colour of the ball is black. What is the probability that it has been drawn from urn – 3.

4. For the matrix  $P = \frac{1}{3} \begin{pmatrix} 1 & 2 & 2 \\ 2 & 1 & -2 \\ -2 & 2 & -1 \end{pmatrix}$  verify that  $pp' = 1 = p'p$ . Where  $p'$  is transpose of  $P$  and

$I$  is the unit matrix of order 3. Hence write down the inverse of  $P$ .

5. Explain the basic assumptions on which the decision tree analysis is based. What are the critical factors the appraiser will have to take into consideration while adopting this method.

P.T.O.



6. Write short notes on the following concepts :
- Rules of addition and multiplication in theory of probability.
  - Distinction between correlation and regression.
  - Explain Skewness and kurtosis with a suitable diagram.
  - Meaning of any two non-parametric tests and their uses.

## SECTION - C

Answer **any two** of the following. **Each** question carries **12** marks. (2×12=24)

7. Compute the two regression equations from the data :
- |   |    |    |    |    |    |    |
|---|----|----|----|----|----|----|
| x | 27 | 30 | 42 | 19 | 25 | 30 |
| y | 31 | 27 | 47 | 12 | 19 | 33 |
- If  $x = 28$ , what is the value of  $y$ .
8. Describe various probability and non probability sampling techniques used.
9. Calculate a set of moving averages of period :
- 3
  - 5
- for the following time series data :
- 8, 11, 10, 21, 4, 9, 12, 10, 23, 5, 10, 13, 11, 26, 6 which set of moving averages is the correct one to use for obtaining a trend for the series.

## SECTION - D

(1×15=15)

10. The following is the information pertaining to the sample psychological health ratings of corporate executives in the field of Banking, Manufacturing and Fashion retailing.

Banking	41	53	54	55	43
Manufacturing	45	51	48	43	39
Fashion Retailing	34	44	46	45	51

Can we consider the psychological health of corporate executives in the given three fields to be equal at 1% and 5% level of significance.

Draw the necessary hypothesis to prove your argument.