

00257
**MASTER OF BUSINESS ADMINISTRATION
(NETWORK INFRASTRUCTURE
MANAGEMENT)
(MBANIM)**

Term-End Examination

December, 2013

**MCR-010 : QUANTITATIVE ANALYSIS FOR
MANAGERIAL APPLICATIONS**

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five questions.

(ii) All questions carry equal marks.

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1. (a) What is important of quantitative analysis ? 10
Explain with examples.
- (b) The difference between simple and 10
compound interest on a sum of money put
out for 4 years at 5% p.a. is Rs. 150. Find
the sum.
2. Price of a new Maruti car is Rs. 2,25,000 and it 20
can be sold for Rs. 85,000 after 10 years.
Determine the value of the car after 3 years on
the assumption that the depreciation is linear.
3. (a) Evaluate : 10

$$\lim_{x \rightarrow 2} \left\{ \frac{x^2 + x - 6}{x - 2} \right\}$$

- (b) Using laws of indices, simplify 10

$$\left[\frac{4x^5}{y^3} \right]^3$$

4. (a) What is difference between dispersion (variation) and skewness ? 10

- (b) From the following data, calculate standard deviation and variance. 10

Roll No.	5	15	25	35	45	55
Marks	10	20	30	50	40	30

5. (a) What are the properties of normal distribution/normal curve ? 5

- (b) The weight of bournvita packs packed by the filling machine follow a normal distribution with mean weight 500 gms and standard deviation of 10 gms. A pack is selected at random. What is the probability that : 15

- (i) Its weight will exceed 515 gms.
- (ii) Pack weight lie within 480 to 520 gms.
- (iii) What proportion of packs will have less than 480 gms and greater than 520 gms.
- (iv) If 10,000 packs are supplied how many will be rejected if 480 gms are 520 gms an upper and lower limit for acceptance.

6. (a) What is Central Limit Theorem ? Explain its application in Statistical Quality Control. 12
- (b) What are main characteristics of Chi-square test ? 8
7. (a) What is distinction between correlation and regression ? 5
- (b) For a bivariate data, the mean value of x is 20 and mean value of y is 45. The regression co-efficient of y on x is 4 and that of x on y is $1/9$.
- Find : (i) The co-efficient of correlation. 5
- (ii) The standard deviation of x given that standard deviation of y is 2. 5
- (iii) The equation of regression lines. 5
8. Write short notes on **any four** of the following : 4x5=20
- (a) Continuous probability distribution
- (b) Collection of data
- (c) Business forecasting
- (d) Types of skewnesses
- (e) Decision theory
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