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## M.B.A. DEGREE EXAMINATION MAY 2014. <br> (BUSINESS APPLICATIONS) <br> (FIRST YEAR)

120 - STATISTICAL METHODS FOR BUSINESS ECONOMICS
Time : Three hours
Maximum : 75 marks

## SECTION A <br> Answer any FIVE questions.

All questions carry equal marks.

1. What do you mean by Relative Frequency and Percent Frequency distribution?
2. What do you mean by measure of central tendency?
3. What is Cluster sampling means?
4. Define population mean.
5. Define Hypothesis.
6. Define Type I error and Type II error.
7. Define Homogenous production Function.
8. What is meant by forecasting?

## SECTION B

Answer any THREE questions.
All questions carry equal marks.
9. Explain the application of reserve and cost function in economics.
10. From the following data calculate Karl Pearson's coefficient of correlation. Assuming arithmetic means of X and Y are 6 and 8 respectively.

| X | 6 | 2 | 10 | 4 | 8 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Y | 9 | 11 | 5 | 8 | 7 |

11. A person is known to hit the target in 3 out of 4 shots, whereas another person is known to hit the target in 2 out oft 3 shots, find the probability of the target being hit at all when they both try.
12. Explain the procedure to formulate a mathematical problem.
13. Explain the different types of classification of index numbers.

## SECTION C <br> Answer any ONE questions.

14. In an anti-malarial campaign in a certain area, quinine was administered to 812 persons out of a total population of 3248 . The number of fever cases is shown below :

| Treatment | Fever | No fever | Total |
| :--- | :---: | :---: | :---: |
| Quinine | 20 | 792 | 812 |
| No. quinine | 220 | 2216 | 24363 |
| Total | 240 | 3008 | 3248 |

Discuss the usefulness of quinine in checking malaria.
15. Explain the various components of time series with a suitable example.
16. Explain the applications of revenue and cost functions in economics.

## SECTION D

(Compulsory)
17. The following table gives the yields on 15 sample plots under three varieties of seeds :

| A | B | C |
| :---: | :---: | :---: |
| 20 | 18 | 25 |
| 21 | 20 | 28 |
| 23 | 17 | 22 |
| 23 | 17 | 22 |
| 16 | 15 | 28 |
| 20 | 25 | 32 |

Find out if the average yields of land under different variances show significant differences.

