

**MANAGEMENT PROGRAMME**

**Term-End Examination**

**December, 2016**

01675

**MS-008 : QUANTITATIVE ANALYSIS FOR  
MANAGERIAL APPLICATIONS**

*Time : 3 hours*

*Maximum Marks : 100*

*(Weightage 70%)*

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- Note :**
- (i) *Section A has six questions, each carrying 15 marks. Attempt any four questions from this section.*
  - (ii) *Section B has two questions, each carrying 20 marks. Attempt both the questions from this section.*
  - (iii) *Use of scientific calculator is permitted.*
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**SECTION - A**

1. If a person repays a loan of ₹ 3250 by paying ₹ 20 in the first month and then increases the payment by ₹ 15 every month. How long will he take to clear his loan ?
  
2. What do you understand by 'Central tendency' ? Describe the measures of central tendency. Also, define the related positional measures, like quartiles, deciles and percentiles.

3. A certain manufacturing process yield electrical fuses of which, in the long run, 15% are defective. Find the probability that in a sample of 10 fuses selected at random there will be :
- (a) no defective
  - (b) at least one defective
4. For a set of 1000 observations known to be normally distributed, the mean is 534 cm and standard deviation is 13.5 cm. How many observations are likely to exceed 561 cm ? How many will be between 520.5 cm and 547.5 cm ? (Given :  $P(0 \leq Z \leq 1) = 0.3413$ ;  $P(0 \leq Z \leq 2) = 0.4772$ )
5. Before an increase in excise duty on tea, 400 people out of a sample of 500 people were found to be tea drinkers. After an increase in duty 400 people were tea drinkers in a sample of 600 people. Test whether there is a significant decrease in the consumption of tea. You may use a 5% level of significance.
6. Write short notes on **any three** of the following :
- (a) Less than type ogive.
  - (b) Algebraic and Transcendental functions.
  - (c) Level of significance.
  - (d) Disproportional stratified sampling.
  - (e) Criterion of optimism

## SECTION - B

7. Define Hypothesis. Explain various type of errors in testing of Hypothesis. Describe various steps involved in the 'Hypothesis testing'.
8. Given below are the figures of production (in metric tonnes) of a sugar factory :

Year	2008	2009	2010	2011	2012	2013	2014
Production (In m. Tons)	80	90	92	83	94	99	92

Estimate a linear trend equation and use it to forecast the production for 2015.

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