MS-8

MANAGEMENT PROGRAMME

Term-End Examination

June, 2016

MS-8 : QUANTITATIVE ANALYSIS FOR MANAGERIAL APPLICATIONS

Time : 3 hours

02244

Maximum Marks : 100 (Weightage 70%)

Note :	<i>(i)</i>	Section A has six questions, each carrying
		15 marks. Attempt any 4 questions from this
		section.
	<i>(ii)</i>	Section B is compulsory and carries
		40 marks. Attempt both questions.
	(iii)	Statistical tables may be supplied on request.

(iv) Use of calculator is permissible.

SECTION - A

1. A salesman has the following record of sales during three months for three items A, B and C, which have different rates of commission :

Month	Sale	e of U	nits	Total Commission		
WOILD	Α	В	C	drawn (in ₹)		
Jan	90	100	20	800		
Feb	130	50	40	900		
Mar	60	100	30	850		

Find out the rates of commission on items A, B and C.

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P.T.O.

2. The following results were obtained on the basis of runs scored by two players A and B in 10 matches. Who is a more consistent player ?

	Player A	Player B
Average runs	44.30	62.70
Standard deviation	4.21	9.83

- 3. In a sample of 1,000 cases, the mean score of a certain test is 14 and standard deviation is 2.5. Assuming normality find :
 - (a) How many candidates score between 12 and 15 ?
 - (b) What is the probability that a candidate selected at random will score above 20?
- 4. What is time series analysis ? Decompose a time series into its various components and describe them.
- 5. In a locality of 18,000 families, a sample of 840 families was selected at random. Of the 840 families, 210 had a weekly income of ₹ 500 or less. Estimate the number of families having weekly income of ₹ 500 or less in the population at 99.73% confidence level.
- 6. Write short notes on any three of the following :
 - (a) Absolute value function
 - (b) Skewness
 - (c) Baye's Theorem
 - (d) Multistage sampling
 - (e) Delphi

SECTION - B

- 7. What is a random variable ? How is it used to define a probability distribution ? Make the probability distribution of "Number of Heads" in a toss of three coins.
- 8. A HR manager is interested in trying to determine whether absenteeism is uniformly distributed over the week days? His record for the past year show this sample distribution :

Day of the week	Mon	Tue	Wed	Thu	Fri
No. of Absentees	66	57	54	48	75

Test whether the absense is uniformly distributed over the week ? (Given tabulated value of test statistic at 0.05 is 9.49)