

02244

MANAGEMENT PROGRAMME**Term-End Examination****June, 2016****MS-8 : QUANTITATIVE ANALYSIS FOR
MANAGERIAL APPLICATIONS***Time : 3 hours**Maximum Marks : 100**(Weightage 70%)*

- Note :**
- (i) *Section A has six questions, each carrying 15 marks. Attempt any 4 questions from this section.*
 - (ii) *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 of Units			Total Commission drawn (in ₹)
	A	B	C	
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.

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 :
- How many candidates score between 12 and 15 ?
 - 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 :
- Absolute value function
 - Skewness
 - Baye's Theorem
 - Multistage sampling
 - 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)
