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FIRST SEMESTER M.COM. DEGREE EXAMINATIONS, NOVEMBER 2003

PAPER 1.2 : STATISTICS FOR BUSINESS AND MANAGEMENT-I

Time: 3 Hours. Max. Marks: 80

SECTION - A (4x10=40)

Note: Answer any FOUR questions. Each question carries 10 marks.

1. Mention the laws of Indices. Solve $\frac{16(32)^m - 2^{3m-2}4^{m+1}}{15.2^{m-1}(16)^m} - \frac{5^m}{\sqrt{5^{2m}}}$

2. What are surds? Give an example. Find the square root of $31+4\sqrt{21}$.

3. State Binomial Theorem. Expand using Binomial Theorem $(x+3)^5$.

4. Define Geometric Progression. The first term in geometric progression is 10 and the fourth term is 640. Find the common ratio and the sum of first five terms.

5. What is "Editing of Time Series"? Explain the method of measuring trend by least square method.

6. Explain the different methods of measuring correlation.

7. Define control limits. Compare R-Chart and P-Chart.

SECTION - B (2x20=40)

Note: Answer any TWO questions. Each question carries 20 marks.

8. Calculate co-efficient of correlation between sales and expenses of the following 10 firms (in 000) Rs.

Firms	1	2	3	4	5	6	7	8	9	10
Sales	50	50	55	60	65	65	65	60	60	50
Expenses	11	13	14	16	16	15	15	14	13	13

Find the co-variance of sales and expenses. Test whether correlation co-efficient is significant.

9. Find the Multiple Regression Equation of x_1 on x_2 and x_3 from the data given below:

x_1	2	4	6	8
x_2	3	5	7	9
x_3	4	6	8	10

10. Fit an exponential trend for the following data :

Year	1999	2000	2001	2002	2003
Profits (000 Rs.)	1.6	4.5	13.8	40.2	125.0

Estimate the profit for the year 2006.

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