

V Semester B.B.M. Examination, June/July 2011
BUSINESS MATHEMATICS

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **any five** sub-questions. **Each** sub-question carries **two** marks. **(2×5=10)**

1. a) What are monomials ?
b) What is a ratio ?
c) Define geometric mean.
d) What is a quartile ?
e) What is a Poisson distribution ?
f) State the general LP model.

SECTION – B

Answer **any four** questions. **Each** question carries **five** marks. **(4×5=20)**

2. A money lender charges interest at the rate of 10% per month payable in advance. What is the effective rate of interest per annum ?
3. You want to burn 400 calories during 40 minutes of exercise. You burn 8 calories per minute inline skating and 12 calories per minute swimming. How long should you spend doing each activity ?
4. In what ratio should a 20% methyl alcohol solution be mixed with a 50% methyl alcohol solution. So that the resultant solution has 40% methyl alcohol in it ?
5. What does merchandising cover ?
6. Explain the steps to calculate correlation coefficient with the help of a suitable example.

P.T.O.

SECTION – C

Answer **any five** questions. **Each** question carries **ten** marks.

(10×5=50)

7. Explain some of the excel functions available for measurement of central tendencies.
8. Explain the difference between right-skewed and left-skewed distribution with an example.
9. Discuss EXCEL functions for binomial distributions.
10. Find AB using MS-Excel if

$$A = \begin{bmatrix} 5 & 6 \\ 7 & 8 \end{bmatrix} \text{ and } B = \begin{bmatrix} 5 & 9 \\ 8 & 0 \end{bmatrix}.$$

11. What amount of money will you have to deposit now if you want to have Rs. 2,50,000 in your account in 10 years from now ? Annual interest rate is a constant 4.5% and is compounded monthly.
 12. Explain the methods for net cash flows. Explain excel functions for the same.
 13. Find correlation coefficient of x and y series using Excel steps.
 14. The car number plates is formed by 4 digits from the digits 1, 2, 3, 4, 5, 6, 7, 8 and 9 followed by 3 letters from the alphabet. How many number plates can be formed ?
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