

I Semester B.B.A. Examination, November/December 2015
(F + R) (CBCS) (2014-15 and Onwards)

1.5 : QUANTITATIVE METHODS FOR BUSINESS – I

Time : 3 Hours

Max. Marks : 70

- Instructions:** 1) Answers should be written in **English**.
2) **All the rough work must be shown on the right hand margin.**

SECTION – A

1. Answer **any five** sub-questions from the following. **Each** carries **two** marks. (5×2=10)
- Give the meaning of Ratio.
 - Find the 4th proportion to 2, 8, 3, ?
 - Mention any four types of matrices.
 - Find the HCF of 144, 348 and 444.
 - What is meant by Quadratic equation ?
 - Calculate simple interest on Rs. 20,000 for 4½ year @ 9% p.a.
 - Give the formula to calculate the sum of n terms of an Ap.

SECTION – B

Answer **any three** of the following. **Each** carries **six** marks. (3×6=18)

- Solve for x : $\frac{x+4}{4} + \frac{x-5}{3} = 11$.
- IS 101 a term of the series 5, 7, 9
- A certain amount of money letout at simple interest amounts to Rs. 1,380, in 3 years and it amounts to Rs. 1,500 in 5 years. Find the sum and rate of interest.
- If $A = \begin{bmatrix} 2 & 3 \\ 1 & -1 \end{bmatrix}$ $B = \begin{bmatrix} 0 & -3 \\ -1 & 3 \end{bmatrix}$ find a 2×2 matrix x such that $A - X = 3B$.
- Two number are in the ratio of 4 : 5 and if 24 is subtracted from each of them the remainders are in the ratio of 2 : 3 find those numbers.



SECTION - C

Answer **any three** of the following. **Each carries fourteen marks.** (3×14=42)

7. a) Solve through formula method : $x^2 + 3x - 28 = 0$.
 b) How many integers are there between 25 and 129 which are divisible by 7.
8. a) A purchased 4 tons of Wheat and 3 tons of Sugar for Rs. 31,000, B purchased 3 tons of Wheat and 2 tons of Sugar for Rs. 22,000. Find the price per ton of Wheat and Sugar.
 b) Which term of Ap of 5, 13, 21 is 181.
9. a) Find the Banker discount, true discount, bankers gain and discounted value on a bill of Rs. 10,500 due for 9 months @ 9%, p.a.
 b) What amount of money that we have invest today to receive Rs. 1,925.40 payable after 5 years @ 14% compound interest ?
10. a) If $A = \begin{bmatrix} 0 & 2 & 3 \\ 2 & 1 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 7 & 6 & 3 \\ 1 & 4 & 5 \end{bmatrix}$.
 Find i) $5B - 3A$ ii) $2A + 4B$
 b) Find the difference between compound interest and simple interest on Rs. 80,000 for 3 years @ 10% p.a.
11. a) By selling an article for Rs. 121, the dealer gains 10% . What is the percentage of Profit or Loss if the article is sold for Rs. 104.50.
 b) Solve by Cramer rule
 $5x - 7y = 2$
 $7x - 5y = 3$.