UN – 407

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)**
   a) Give the meaning of Ratio.
   b) Find the 4^{th} proportion to 2, 8, 3, ?
   c) Mention any four types of matrices.
   d) Find the HCF of 144, 348 and 444.
   e) What is meant by Quadratic equation ?
   f) Calculate simple interest on Rs. 20,000 for 4½ year @ 9% p.a.
   g) 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)**

2. Solve for x : $\frac{x+4}{4}+\frac{x-5}{3}=11$.

3. IS 101 a term of the series 5, 7, 9 . . . .

4. 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.

5. 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.

6. Two number are in the ratio of 4 : 5 and if 24 is substracted from each of them the remainders are in the ratio of 2 : 3 find those numbers.

P.T.O.

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

    $5x - 7y = 2$

    $7x - 5y = 3$.