I Semester B.B.M. Examination, Nov./Dec. 2014
(New Syllabus) (2012-13 and Onwards) (Repeaters)
BUSINESS MANAGEMENT
Paper – 1.5 : Quantitative Methods For Business – I

Time : 3 Hours

Max. Marks : 100

Instructions : *Answer should be written in **English**. All the rough work*
*must be shown on the **right** hand margin.*

SECTION – A

Answer **any 8** of the following. **Each** question carries **2** marks.   (2×8=16)

1. a) Find LCM of 15, 50, 150.

   b) Find the 10th term of AP 2, 0, –2, –4, . . .

   c) 25% of a certain sum is 400. Find the sum.

   d) What is unit matrix ? Give an example.

   e) Divide $\dfrac{16}{3} \div \dfrac{15}{2}$.

   f) Give the meaning of real number.

   g) Find the geometric mean between 9 and 81.

   h) In a college there are 240 female students, it is 60% of total students. How many students are there in a college ?

   i) What is Banker's discount ?

   j) Find out compound interest on Rs. 2,000 at 8% P.A. for 5 years.

SECTION – B

Answer **any 3** of the following. **Each** question carries **8** marks.   (8×3=24)

2. If 30 men can do a job in 40 days. How long 120 men can do the same job ?

3. Solve for x $\dfrac{2}{x-1} + \dfrac{3}{x+4} = \dfrac{5}{x+3}$.

4. If $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 0 & 1 & 2 \\ 3 & 2 & 6 \end{bmatrix}$. Find (i) A + B (ii) A – B.

5. The third term of a G.P. is 12 and 6th term is 96. Find the 9th term.

P.T.O.

SECTION – C

Answer question no. **10** and **any 3** of the remaining questions. **Each** question carries 15 marks.

<div align="right">(15×4=60)</div>

6. a) Solve $\dfrac{4}{x} + x = 6\,\dfrac{2}{3}$.

   b) $A = \begin{bmatrix} 4 & 1 \\ 2 & 3 \end{bmatrix}$ and $A + 2B = A^2$. Find the matrix 'B'.

7. a) Sum of 3 numbers in AP is 27 and their product is 504. Find the numbers.

   b) Calculate the simple interest and the amount on Rs. 7,500 from 20th January 2013 to 10th April 2013 at 8% P.A.

8. a) In 12 years a sum of money becomes double. In how many years will it be triple itself ?

   b) A man saves Rs. 20 in 1st month, 30 in the 2nd month and Rs. 40 in the 3rd month and so-on. Findout the total amount saved in 5 years.

9. a) If $A = \begin{bmatrix} 9 & 1 \\ 4 & 3 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 5 \\ 7 & 12 \end{bmatrix}$. Find matrix x such that $2A + 5B + 2X = 0$.

   b) Find the sum of the series $2\,\dfrac{1}{5} + 5 + 7\,\dfrac{1}{2} \ldots$ to 15 terms.

10. a) If the difference between banker's discount and true discount on a sum due in 4 months at 3% PA is Rs. 10. Find the amount of a bill.

    b) The ratio of the students in Arts, Science and Commerce faculties is 5 : 4 : 3. If the number of students in Science faculty is 236, find the number of students in Arts and Commerce faculties.