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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

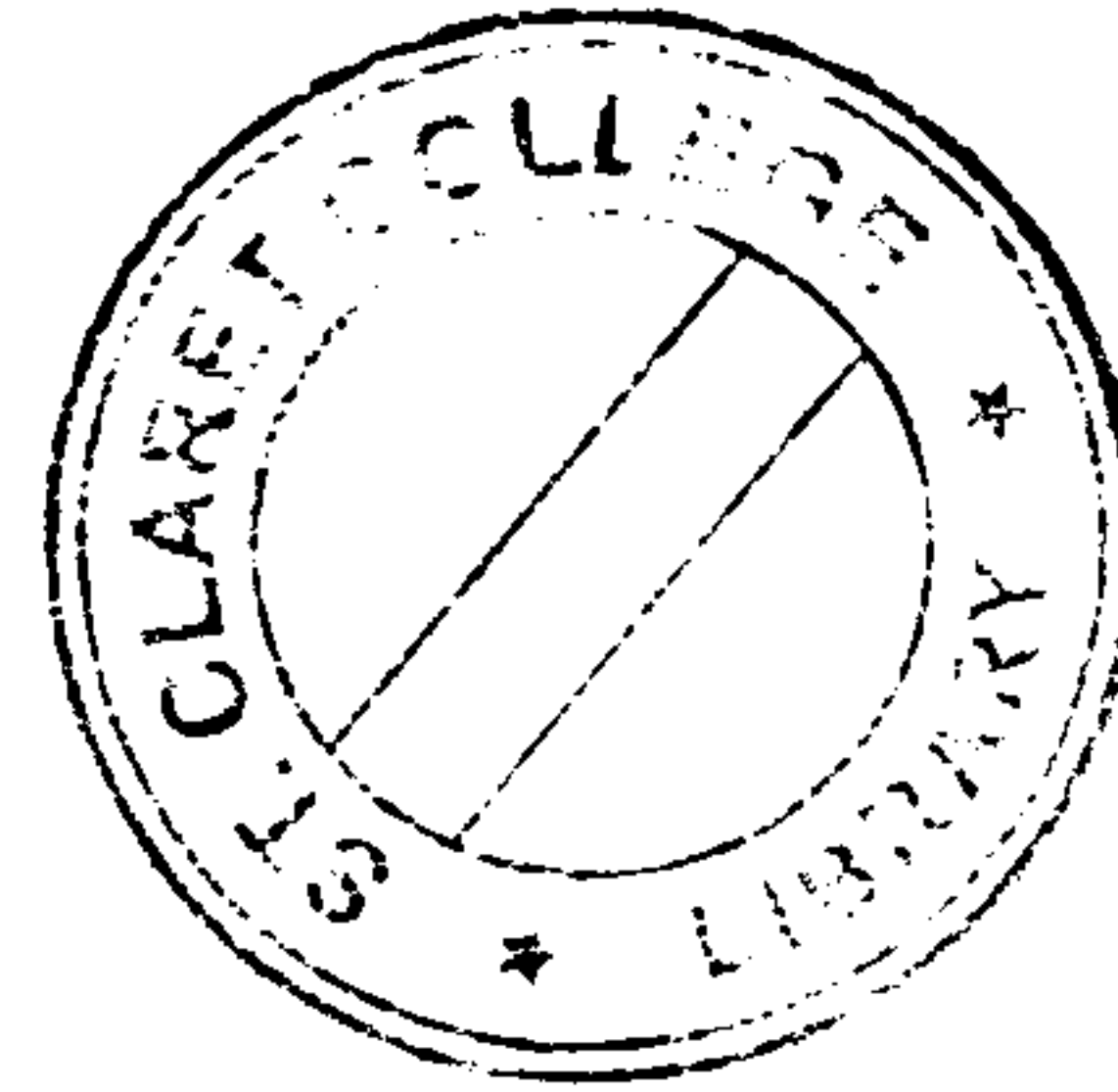
Instructions : Answer should be written in **English**. All the rough work must be shown on the **right** hand margin.

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 $\frac{16}{3} \div \frac{15}{2}$.
- 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 $\frac{2}{x-1} + \frac{3}{x+4} = \frac{5}{x+3}$.
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. (15×4=60)

6. a) Solve $\frac{4}{x} + x = 6\frac{2}{3}$.
- 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 $2\frac{1}{5} + 5 + 7\frac{1}{2} \dots$ 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.
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