



UN – 411

18
I Semester B.B.M. Examination, November/December 2015
(2012 – 13 & Onwards) (Repeaters)
BUSINESS MANAGEMENT
Paper – 1.5 : Quantitative Methods for Business – I

Time : 3 Hours

Max. Marks : 100

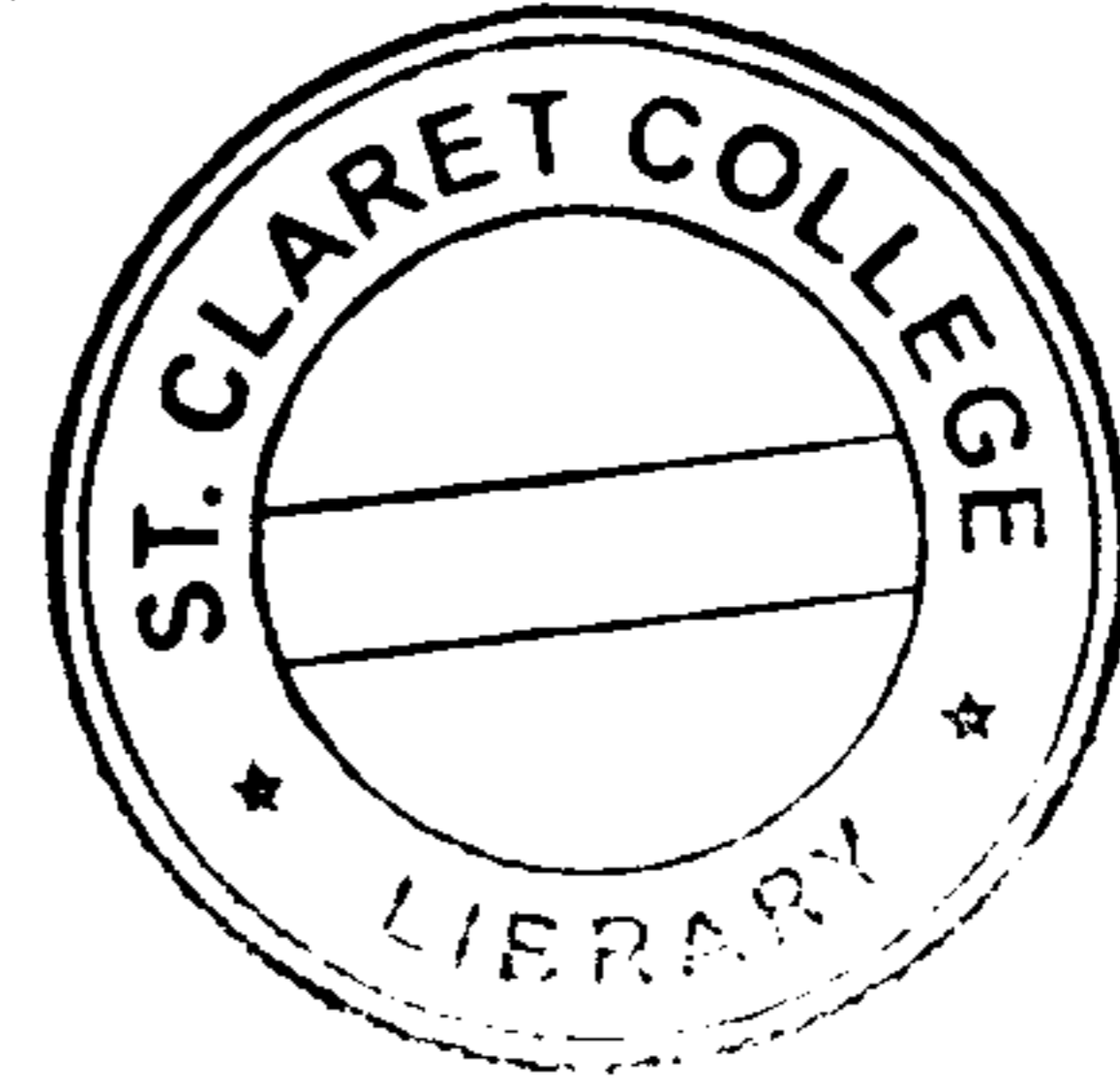
Instructions : Answer should be written in **English**. All the rough work must be shown on the **right** hand margin.

SECTION – A

1. Answer **any 8** of the following. **Each** question carries **2** marks.

(8×2=16)

- a) What is LCM and HCF ?
- b) Write the types of Equations.
- c) Find value of X, when $3x^2 - 27 = 0$.
- d) What is degree of an equation ?
- e) What is Identity matrix ?
- f) Find the simple interest on ₹ 2,250 for 4 years @ 10% p.a.
- g) Define True Discount.
- h) What is Percentage ?
- i) Write the types of Progression.
- j) Find the sum of first 10 natural numbers.



SECTION – B

Answer **any 3** of the following. **Each** question carries **8** marks.

(3×8=24)

2. Solve $\frac{4x+11}{3} - \frac{6(x-7)}{7} = 13$.

3. If $A = \begin{bmatrix} 1 & 3 \\ 4 & 2 \end{bmatrix}$ $B = \begin{bmatrix} 2 & 1 \\ 3 & 4 \end{bmatrix}$.

Find AB' and $A'B$ and comment on result.

P.T.O.



4. 8 men and 16 boys can do a work in 39 days. In how many days will A men and 18 boys do it ?
5. Divide ₹ 800 and ₹ 1,600 between A and B in 2 : 4 and 4 : 8.

SECTION – C

Answer questions No.10 and **any 3** of the remaining questions. **Each** question carries **15** marks. (4×15=60)

6. Solve $\frac{x}{4} - 22 = \frac{-y}{5}$ and $\frac{y}{4} - 23 = \frac{-x}{5}$.

7. a) $X + Y = \begin{bmatrix} 1 & -2 \\ 3 & 4 \end{bmatrix}$ and $X - Y = \begin{bmatrix} 3 & 2 \\ -1 & 0 \end{bmatrix}$. Find X and Y.

b) What sum lent at compound Interest would amount to ₹ 6,615 at 5% p.a. in 2 years ?

8. a) What is the percentage commission of an agent who gets ₹ 200 for a sale of ₹ 5,000 ?

b) Find the present value , True discount, Banker's discount and Banker's gain on a bill of ₹ 10,900 due in 9 months at 5% p.a.

9. a) If the 3rd term of an AP is 7 and 6th term is 13. Find the first term and common difference.

b) A person deposited ₹ 6,250 for 73 days and received ₹ 6,350. Find the rate of Simple Interest.

10. a) If $A = \begin{bmatrix} 2 & -1 \\ -1 & 2 \end{bmatrix}$. Show that $A^2 - 4A + 3I = 0$.

b) 30 kg of cake and 26 kg of sweets together cost ₹ 7,100 and 25 kg of cake and 13 kg of sweets together cost ₹ 5,050. Find the cost price of each per kg.

10/24/2019