



GN-365

103096

I Semester B.B.A. Examination, December - 2019
(CBCS) (F+R) (2014-15 and Onwards)

BUSINESS ADMINISTRATION

1.5 : QUANTITATIVE METHODS FOR BUSINESS - I

Time : 3 Hours

Max. Marks : 70

Instruction : Answers should be written in **English** only.

SECTION - A

Answer **any five** sub-questions from the following. Each sub-question carries **2** marks. **5×2=10**

1. (a) Give the meaning of Prime Numbers.
- (b) Solve for 'x' if $x+3+x=5$.
- (c) What is a square matrix ?
- (d) Find LCM of 28, 42 and 98.
- (e) Find the 10th term of AP 10, 12, 14.....
- (f) If 16% of the population of a city is 4,000, find the total population of the city.
- (g) Write the duplicate ratio of $\sqrt{2} : \sqrt{5}$.

SECTION - B

Answer **any three** questions of the following. Each question carries **6** marks. **3×6=18**

2. The sum of 3 numbers in AP is -15 and their product is -80. Find the numbers.

3. Solve for x if $\frac{x+1}{2} - \frac{x-2}{3} = \frac{x+4}{5} + \frac{7}{15}$.

4. Show that : $\begin{vmatrix} 3 & 4 & 7 \\ 2 & 1 & 3 \\ -5 & -1 & 2 \end{vmatrix} = -40$

P.T.O.



5. Solve by the method of elimination.

$$x + 2y = 4$$

$$3x + y = 7$$

6. From a man's salary, 15% is paid as rent, 60% as living expenses, 20% deposited in a bank and ₹ 325 is spent for education of his children. What is his salary ?

SECTION - C

Answer **any three** questions of the following. Each question carries **14** marks. **3 × 14 = 42**

7. (a) Solve by Formula Method. **7+7**

$$x^2 - 3x = 0$$

- (b) The sum of 3 terms in GP is 14 and their product is 64. Find the numbers. **7+7**

8. (a) Solve by Cramer's rule. **7+7**

$$3x - y = 6$$

$$2x - 15 = -3y$$

- (b) If $A = \begin{bmatrix} 2 & 4 & 4 \\ 4 & 2 & 4 \\ 4 & 4 & 2 \end{bmatrix}$ Prove that $A^2 - 8A - 20I = 0$

9. (a) Divide ₹ 1,600 between A, B and C so that B may have ₹ 100 more than A and C, ₹ 200 more than B. **7+7**

- (b) 30 men work for 8 hours a day for 24 days to finish a work. In how many days, 18 men working for 10 hours a day will finish double the work ?

10. (a) The difference between SI and CI on a certain sum of money for 5 years at 10% p.a. is ₹ 600. Find the sum. **7+7**

- (b) A sum of 3 terms in an AP is 36 and their product is 1536. Find the numbers.

11. (a) A man borrowed ₹ 62,500 from a bank. After 2 years he paid ₹ 67,600 in full settlement of his debt. Find the rate of compound interest. **7+7**

- (b) Find the present value of true discount, Banker's discount and Banker's gain on a bill of ₹ 10,450 due in 9 months at 6% p.a.