



560

I Semester B.B.A. Examination, December 2018
(2018-19 CBCS Scheme) (Freshers)
BUSINESS ADMINISTRATION
Quantitative Methods for Business – I

Time : 3 Hours

Max. Marks : 70

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

SECTION – A

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

- What are rational numbers ?
- Find x , $x - 6 = 0$.
- What do you mean by diagonal matrix ?
- If $\begin{vmatrix} x & 3 \\ 8 & 4 \end{vmatrix} = 0$ find x .
- Find the 5th term of GP 4, 12, 36, ...
- What is Banker's discount ?
- Find the mean proportional to 21 and 84.

SECTION – B

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

- Find the HCF of 3024, 4752 and 7488.
- The sum of 4 consecutive numbers is 166. Find the numbers.
- Find the sum of the series $-3, +3, +9, +15 \dots$ upto 16 terms.
- If $A = \begin{bmatrix} 9 & 1 \\ 4 & 3 \end{bmatrix}$ $B = \begin{bmatrix} 1 & 5 \\ 7 & 12 \end{bmatrix}$ find $3A + 4B$.
- Find the principal to earn Rs. 150 S.I. in 6 years @ 5% p.a.

P.T.O.



SECTION - C

Answer **any 3** of the following. **Each** question carries **14** marks.

(14×3=42)

7. a) A father is 28 years older than the son. In 5 years, the father's age will be 7 years more than twice that of the son. Find their present ages.

b) Find the 40th term of an AP whose 9th term is 465 and 20th term is 388.

8. a) Determine the kind of progression in the following and also state the common difference or common ratio.

$$\frac{6}{11}, \frac{3}{11}, \frac{3}{22}, \frac{3}{44}$$

b) Solve for A and B if

$$A - 2B = \begin{bmatrix} 4 & 6 & -10 \\ 6 & -4 & 2 \end{bmatrix} \text{ and } 2A - B = \begin{bmatrix} 4 & -8 & 2 \\ 4 & 0 & 2 \end{bmatrix}$$

9. a) Evaluate $\begin{vmatrix} 7 & 6 & 1 \\ 5 & 3 & 8 \\ 3 & 2 & 4 \end{vmatrix}$.

b) In an examination 70% of the students passed in English, 65% passed in Mathematics and 27% failed in both subjects and 248 passed in both. Find the total number of students who appeared for the examination.

10. a) Using Cramer's rule solve :

$$3x - y = 6$$

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

b) Find the difference between simple interest and compound interest on Rs. 2,500 in 4 years at 4% p.a.

11. a) 8 men or 16 boys can do a work in 39 days ; in how many days will 4 men and 18 boys do it ?

b) A banker paid Rs. 1,451 for a bill of Rs. 1,460 drawn on 1st April, at 6 months date. On what date was the bill discounted, the rate of interest being 5% p.a. ?