I Semester B.Com. Examination, March/April 2022
(CBCS) (2020 – 21 & Onwards)
(Repeaters)
Paper – 1.6 : BUSINESS MATHEMATICS

Time : 3 Hours

Max. Marks : 70

Instruction : *Answer should be written completely either in* **Kannada** *or in* **English**.

SECTION – A

1. Answer **any five** sub questions. **Each** sub-question carries **two** marks. (5×2=10)

   a) What are Rational Numbers ?

   b) Give the formula to solve quadratic equations.

   c) If 3 : 5 : : 27 : x, find the value of 'x'.

   d) What is 8% of 250 ?

   e) State the Banker's discount.

   f) Given SI = 1080, r = 12%, n = 3 years. Find principal amount.

   g) If $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 0 & 1 & 2 \\ 3 & 2 & 6 \end{bmatrix}$, find A + B.

SECTION – B

Answer **any three** questions. **Each** question carries **five** marks. (3×5=15)

2. Find the least number which divide by 10, 15 and 25 without a reminder.

3. Solve by formula $x^2 + 3x - 28 = 0$.

4. The present ages of 3 person's are in the ratio is of 4 : 7 : 9. 8 years ago the sum of their ages was 56. Find their present age.

P.T.O.

5. If A = $\begin{bmatrix} 1 & 5 & 6 \\ 7 & 8 & 9 \\ 0 & 1 & 2 \end{bmatrix}$, B = $\begin{bmatrix} 4 & -2 & 3 \\ 0 & 1 & 2 \\ 3 & 4 & 5 \end{bmatrix}$ and C = $\begin{bmatrix} 2 & 3 & 1 \\ 1 & 4 & 5 \\ 3 & 8 & 6 \end{bmatrix}$

Find :

   i) A + B   ii) A – B   iii) A + C.

6. Find the compound interest on ₹ 1,600 @ 12% P.A. for 4 years.

SECTION – C

Answer **any three** questions. **Each** question carries **twelve** marks.   **(3×12=36)**

7. Solve by the method of elimination and substitution.

   $3x + 4y = 4$

   $5x + 7y = 4.$

8. If 5 carpenter's can earn ₹ 3,600 in 6 days working at 9 hours a day. How much will 8 carpenter's can earn in 12 days ?

9. Find :

   i) TD
   ii) BD
   iii) BG on a bill of ₹ 11,450, due 3 months hence @ 5% P.A.

10. Solve by using Crammer's rule

   $3x + 5y = 8$

   $6x + 5y = 11.$

11. a) Find the HCF of 12 and 28 and then find their LCM.

   b) If A = $\begin{bmatrix} 2 & 3 \\ 4 & 2 \end{bmatrix}$ and B = $\begin{bmatrix} 3 & 2 \\ 4 & 5 \end{bmatrix}$, find AB' and A'B.

SECTION – D

Answer the following **compulsory** question.   **(1×9=9)**

12. a) Draft the procedure of discounting the bill of Commercial Banks.

                   OR

   b) On selling a table fan for ₹ 4,300, a dealer losses 14%, for how much should he sell it to gain 14% ?