



I Semester B.Com. Examination, April/May 2021
(CBCS) (2020 – 21 and Onwards) (Freshers)
Commerce

1.6 : BUSINESS MATHEMATICS

Time : 3 Hours

Max. Marks : 70

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

SECTION – A

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

a) What are natural numbers ?

b) Define Quadratic Equation.

c) If $5 : 20 :: 3 : x$, find the value of x .

d) Manish obtain 45 marks out of 60 marks. What percent of marks did he get ?

e) What is Banker's gain ?

f) Given $SI = 540$, $r = 6\%$, $n = 3$ years, find principal amount.

g) If $A = \begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 5 \\ 1 & 2 \end{bmatrix}$, find $A + B$.

SECTION – B

Answer any three questions. Each question carries 5 marks.

(3×5=15)

2. Find the least number which divide 18, 24 and 56 leaves a remainder 2.

3. Solve by formula $6x^2 = 12 + 11x$.

4. If 15 chairs cost ₹ 750. What will be the cost of 120 chairs at the same price ?

5. If $A = \begin{bmatrix} 1 & -1 \\ -2 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 1 \\ 3 & -2 \end{bmatrix}$, find AB .

6. Find the compound interest on ₹ 800 @ 6% p.a. for 4 years.

P.T.O.



SECTION – C

Answer any three questions. Each question carries 12 marks.

(3×12=36)

7. Solve by the method of elimination :

$$2x - y = 5$$

$$x - 4y = -1.$$

8. If 12 pumps working 7 hours a day can lift 2,800 gallons of water in 20 days, in how many days can 20 pumps working 9 hours a day lift 3,000 gallons of water ?

9. Find :

1) TD 2) BD 3) BG on a bill of ₹ 10,450 due 3 months hence @ 5% p.a.

10. Solve by Cramer's rule.

$$8x + 5y = 3$$

$$5x + 3y = 2.$$

11. a) Find HCF & LCM of 45, 75 and 225.

b) If $A = \begin{bmatrix} 2 & 3 \\ 1 & 4 \end{bmatrix}$, $B = \begin{bmatrix} -3 & -1 \\ 2 & 0 \end{bmatrix}$, find $3A - 2B$.

SECTION – D

Answer the following compulsory question.

(1×9=9)

12. A) Draw a chart to show classification of ratios and explain.

OR

B) A Printer is sold at a profit of $12\frac{1}{2}\%$ for ₹ 4,500. Find its cost price and

calculate selling price of cost of a Printer ₹ 1,00,000 profit charged at 25% on selling price.

ಕನ್ನಡ ಆವೃತ್ತಿ

ವಿಭಾಗ - ಎ

1. ಯಾವುದಾದರೂ ಐದು ಉಪ-ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಉಪ-ಪ್ರಶ್ನೆಗೂ ಎರಡು ಅಂಕಗಳು. (5×2=10)

a) ಸ್ವಾಭಾವಿಕ ಸಂಖ್ಯೆಗಳು ಎಂದರೇನು ?

b) ವರ್ಗಸಮೀಕರಣವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.