



MID SEMESTER EXAMINATION- OCTOBER 2024

COMMERCE - I SEMESTER B.COM

COM 1.4: BUSINESS QUANTITATIVE ANALYSIS

Time: 3 Hours

Max. Marks: 80

Instruction: *Answer should be written completely in English*

SECTION-A

1. Answer **any seven** questions. Each question carries **two** marks. **(7X2=14)**
- Calculate 25% of 90.
 - Divide Rs. 28 between two men in the ratio 2:5.
 - Give the meaning Compound Interest.
 - What is the duplicate ratio of 2:5?
 - Two numbers are in the ratio 5:8. If the sum of the numbers is 195. Find the numbers.
 - Give the meaning of Linear Equation.
 - Find the compound ratio between 2:3, 4:7 and 6:15.
 - A man can do 12 pencils in 15 minutes. How long will it take for him to make 96 pencils?
 - Find the Simple Interest on Rs 2276 for 2 years 6 months @12.5% pa.
 - $6 + 2x = 1 + 3x$, find 'x'

SECTION-B

Answer **any three** questions. Each question carries **eight** marks. **(3X8=24)**

- A person deposited Rs 6200 on June 20th 2024. It amounted to Rs. 6,250 on September 1, 2024 @ SI.
Find the rate of Interest.
- If $10(x - 4) - 15(x - 3) = 3(3 + x) - 20$, find x. **(4)**
 - If $3(4x + 1) - (4x - 1) = 2(x + 5)$, find x. **(4)**
- The catalogue price of an article is Rs. 25,000. Trade discount applicable is 20%. Find out the net cash price:

a) If cash discount is 5%

b) If cash discount is 2%

5. a) Solve using elimination method.

$$3x + 7y = 13$$

$$5x - 2y = 8 \quad (4)$$

b) Solve for x using factorisation method.

$$2x^2 + 5x - 3 = 0 \quad (4)$$

6. a) $[(x + 2) + (x + 3)]^2 - [(x + 2) - (x + 3)]^2 = 4x^2 + 64$, find x (4)

b) $\frac{4x+5}{6x-1} = \frac{3+2x}{3x-4}$, Find x. (4)

SECTION-C

Answer **any three** questions. Each question carries **fourteen** marks.

(3X14=42)

7. Find the difference between SI and CI on Rs. 5,000 for 5 years, charging half-yearly @ 6% pa compounded semi-annually.

8. a) A man borrowed Rs 4500 for 9 years at CI, if the rate of interest is 4% p.a. for the first two years, 4.5% p.a. for the next three years and 5% p.a. for the last 4 years. How much does he repay at the end of 9 years? (7)

b) Solve using substitution method:

$$4x - y = 2$$

$$-3x + 2y = 1 \quad (7)$$

9. a) Solve for x. Using formula method;

$$12x^2 - 23x - 24 = 0 \quad (7)$$

b) $2x + 3y = 13$

$$4x + 5y = 23$$

Use elimination method to solve x and y (7)

10. a) If 10 bullocks can plough 12 acres of land since 15 days. How many bullocks will be required to plough 72 acres in 5 days. (7)

b) A number is divided into 3 parts in the ratio of 2:3:4. If the second part is 81. Find the other numbers. (7)

11. a) A's monthly salary is Rs. 250 and B's annual income from agriculture is Rs. 4,000. What is the ratio of their income. (4)

b) Two numbers are in the ratio 5:8. If the sum of the numbers is 182. Find the numbers. (5)

c) Two numbers are in the ratio 5:8. If 9 is added to each, they are in the ratio 8:11. Find the numbers. (5)