



University of Central Punjab

Assignment 1

Course Title: Linear Algebra

CLO Mapping: CLO 1

Course code: CSSS2753

Course instructor: Ms. Sadaf Ijaz

Assignment date: 11th Nov, 2024

Assignment deadline: 15th Nov, 2024

Total marks: 15

Section: D5

It is **COMPULSORY** to submit this **FIRST** page along with your assignment, with your name.

Assignment will NOT BE ACCEPTED without this page, with your name/signatures.

Name:

Registration Number:

Section:

Submission Instructions *(Please follow strictly)*

1. The assignment should be **handwritten**. It should **NOT BE TYPED IN WORD** or any text editor.
If it is not HANDWRITTEN, **ZERO** marks will be awarded.
2. **The Assignment should be written on plain A4 size pages and stapled properly.** (Do not submit in paper files)
3. All questions and pages or in order. (20 % marks will be deducted if pages are not in order)
4. Follow the deadline. Finish your work one day before, so you can submit in time.
5. **LATE SUBMISSION WILL NOT BE ACCEPTED.** 2 marks will be deducted for each day's delay.

I have read and followed the instructions above. In case, some instructions are not followed, I agree to mark deduction as per the above instructions.

Name/Signature _____

THIS IS NOT A COPIED WORK

I declare that it is my work in MY HANDWRITING.

It is NOT COPIED or PLAGARISED from anyone or any resource.

I might have taken help from my fellows or the internet for concept understanding, but I sat alone and did all the work on my own, without looking at any other person's work.

Name/Signature _____

Question No:1

Solve the system by Gauss-Jordan method.

/5

$$4x_1 + 3x_2 + 2x_3 - x_4 = 4$$

$$5x_1 + 4x_2 + 3x_3 - x_4 = 4$$

$$11x_1 + 6x_2 + 4x_3 + x_4 = 11$$

$$-2x_1 - 2x_2 - x_3 + 2x_4 = -3$$

Question No:2

For what value of “a” the system of equations

/5

$$x + y - z = 2$$

$$x + 2y + z = 3$$

$$x + y + (a^2 - 5)z = a$$

has(i) no solutions (ii) a unique solution (iii) an infinite number of solutions.

Question No: 3

/5

Finn, Rosy and Maya go to a jewelry store. Finn buys 3 necklaces, 1 ring and 2 bracelets and spends \$17. Rosy buys 1 necklace, 4 rings and 5 bracelets and spends \$31. Maya buys 6 necklaces, 2 rings and 1 bracelet and spends \$19. How much does each type of jewelry cost?