

MA110 - Linear Algebra & Differential Equations: Midsem

Name:

Roll No.

Tutorial Batch: D T

Max. marks: 60 (Weightage 40%)

February 24th, 2024

8:30 - 10:30 a.m.

INSTRUCTIONS

1. FAILURE TO FOLLOW INSTRUCTIONS WILL RESULT IN A DEDUCTION OF 2 MARKS.
2. Please write your roll no., name, division and tutorial batch on this instruction sheet, the question/answer sheet (referred to as the *answersheet* in subsequent instructions), and the supplement given for rough work. *Answersheets* without roll numbers will be awarded ZERO marks.
3. ONLY ANSWERS WRITTEN IN THE BOXES PROVIDED WILL BE GRADED. Be careful when entering your answers, you will not be given a spare *answersheet* in case you make mistakes.
4. No work is required to be shown in Questions (1) to (12). You may work out the details in the rough sheets, which will not be collected.
5. In Questions (10), (11)(i), and (11)(ii), one or more options are correct. The correct options should be entered in the given boxes as follows: (a), or (a), (c), etc. The marking scheme followed is:
 - (i) All correct options, and no incorrect options chosen: 2 marks
 - (ii) Some correct options, and no incorrect options chosen: 1 mark
 - (iii) If even one chosen option is incorrect: 0 marks
6. In Question (12), in the correct answer, each statement beginning with a " \Rightarrow " should follow directly from the previous statement.
7. You must show your work in Q(13) - (17). Answers without justification will be awarded a "zero".
8. The use of calculators, mobiles, or smart watches is not permitted during the exam. Neither is the use any notes, books, or printed material.
9. The *answersheet* will be collected only at the end of the exam. Furthermore, you will not be permitted to leave to exam hall for any reason until 10:00 a.m.
10. This instruction sheet will be collected while attendance is being taken. Please write your details, and put in your signature and date and keep it ready.

DECLARATION

1. I have read and understood the above, and all other instructions given by the course instructors regarding the conduct of this examination.
2. I am aware of the rules and regulations regarding academic misconduct as given in the rules and regulations of the institute.
3. I will adhere to the principles of academic integrity during this exam. I understand that any form of academic dishonesty will invite the harshest possible penalties as per institute norms.

Date:

Signature:

MA110 - Linear Algebra & Differential Equations: Midsem - X

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TEMPLATE

- (1) Fill in the blanks. [3]
- (2) Fill in the blanks. [2]
- (3) Fill in the blanks. [2]
- (4) Fill in the blanks. [4]
- (5) Fill in the blanks. [3]
- (6) Fill in the blanks. [6]
- (7) Fill in the blanks. [3]
- (8) Fill in the blanks. [6]
- (9) Match each option (i) - (iv) on the left with the correct option (a) - (e) on the right: [4]
- (10) The correct options are [2]
- (11) (i) The correct options are [2]
- (ii) The correct options are [2]
- (12) The statements (a)-(g) are needed to prove the statement: [3]
“ ”
The correct order in which these statements are to be written to give a proof is:
- (13) Long answer. [2]
- (14) Long answer. [2]
- (15) Long answer. Parts (i) - (iv) [6]
- (16) Long answer. Parts (i) - (ii) [4]
- (17) Long answer. [4]