



Indian Institute of Information Technology, Lucknow
End Term Exam
Subject: Computer Organization and Architecture
Mode: Individual
Date: 21 May 2025
Duration: ___ hours
Max Marks: 70

Note: The Marks will be appropriately scaled up/down to the final evaluation model.

Instructions / Note to Students:

1. Please follow all the *Instructions to Candidates* given on the cover page of the answer book.
2. All parts of a question should be answered consecutively.
3. Each answer should start from a FRESH page.
4. Mention the Question Number clearly
5. Each Answer SHOULD NOT Exceed the page limit provided in the question. If no page limit is mentioned the limit has to be treated as one page. Marks will be deducted if your answers exceed the page limits
6. Assumptions made if any, should be stated clearly at the beginning of your answer.
7. If the question asks for your opinion/recommendations - Please mention your recommendations in the FIRST LINE followed by justifications. Do NOT put your recommendations in the end
8. Marks will be deducted for providing irrelevant information in the answers
9. Your answers should be neat and legible. Marks will be deducted for bad handwriting. You may even get a zero for bad handwriting.

Questions:

1. List and briefly define some of the techniques used in contemporary processors to increase speed
[Limit: 1 Page]
2. Explain four alternative methods of rounding the result of a floating-point operation.
[Limit: 1 Page]
3. Answer the following questions regarding cache [Limit : 1 Page]
(a) What are replacement algorithms for Cache Memory?
(b) Why are they needed?
(c) Explain common replacement algorithms (Cache)
4. List and briefly explain three techniques for performing I/O
[Limit : 1 Page]
5. Explain 5 stage pipeline [CPU Processing]
[Limit : 1 Page]