VIETNAM GENERAL CONFEDERATION OF LABOUR

**TON DUC THANG UNIVERSITY**

**FACULTY OF INFORMATION TECHNOLOGY**



**MIDTERM ESSAY FOR**

**DISCRETE STRUCTURES**

**INFORMATION TECHNOLOGY**

**HO CHI MINH CITY, YEAR 2025**

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**MIDTERM REPORT FOR  
DISCRETE STRUCTURES**

**INFORMATION TECHNOLOGY**

**Mai Duy Tân, Dr.**

**HO CHI MINH CITY, YEAR 2025**

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*Ho Chi Minh City, June 3rd*

*Author*

**WORKS COMPLETED**

**AT TON DUC THANG UNIVERSITY**

I would like to assure you that this is my own research and guided by the scientific guidance of Mr. Mai Duy Tân. The research contents and results in this topic are honest and have not been published in any form before. The data in the tables for analysis, comments, and evaluations collected by the author herself from different sources are clearly stated in the references section.

In addition, the report also uses a number of comments, reviews as well as figures of other authors and organizations with quotes and annotations of origin.

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*Ho Chi Minh City, June 3rd*

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# Chapter 1. Solutions

# Chapter 2. ASSIGNMENTS AND SELF-EVALUATION

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | | **Scale** | **1** | **2** | **3** | **Self-evaluation** | | **Reason** | |
|  | | **Score /10** | **0 score** | **1/2 score** | **Full score** |  | |  | |
| Question 1 | | 1 | Do nothing or wrongly. | Correct gcd and lcm, but incorrect solutions of Bezout's identity. | Correct calculation, detailed explanation. | 1 | | Correct and done fully. | |
| Question 2 | | 0.5 | Do nothing or wrongly. | Correct calculation but wrong result or conclusion. | Correct calculation, detailed explanation. | 0.5 | | Correct and done fully. | |
| Question 3 | | 0.5 | Do nothing or wrongly. | Correct Γ but incorrect operations. | Correct calculation, detailed explanation. | 0.5 | | Correct and done fully. | |
| Question 4 | | 0.5 | Do nothing or wrongly. | Correct results but incorrect proofs. | Right results, detailed explanation. | 0.5 | | Correct results with explanations. | |
| Question 5 | | 1 | Do nothing or wrongly. | Reasonable but indetailed proposal. No illustration. | Reasonable detailed proposal with illustration. | 0.5 | | Fully explained, but missing illustration | |
| Question 6 | | 1 | Do nothing or wrongly. | a-Correct recognition, right explanation.  b,c-Good study but incorrect applications. | a-Correct recognition, right explanation.  b,c-Good study, right calculation, detailed explanation. | 1 | | Correct and fully explained. | |
| Question 7 | | 1 | Do nothing or wrongly. | Correct modeling but wrong coloring. | Correct modeling but right coloring. | 1 | | Correct modeling and coloring. | |
| Question 8 | Theoretical research | 0.5 | Do nothing or wrongly | Not enough  details, no  example, no  comment | Correct calculations, detailed explanations | 0.5 | | Correct and detailed with examples. | |
| Implementation | 0.5 | Error | Correct but  bad  performance | Correct and  good  performance | 0.5 | | Correct and good performance. | |
| Test | 0.5 | No test | Test without verification | Test and verification | 0.5 | | Test with correct results and verified. | |
| Question 9 | Theoretical research | 0.5 | Do nothing or wrongly | Not enough  details, no  example, no  comment | Correct calculations, detailed explanations | 0.5 | | Detailed and fully explained, with correct examples. | |
| Implementation | 0.5 | Error | Correct but  bad  performance | Correct and  good  performance | 0.5 | | Correct with decent performance | |
| Test | 0.5 | No test | Test without verification | Test and verification | 0.5 | | Test with correct and verified results. | |
| Analysis | 0.5 | Do nothing or wrongly | Not enough  details, no  example, no  comment | Correct, detailed explanations | 0.5 | | Correct, detailed explanations | |
| Discussion | 0.5 | Do nothing or wrongly | Not enough  details, no  example, no  comment | Correct, detailed explanations | 0.5 | | Correct, detailed explanations | |
| Recommendation | 0.5 | Do nothing or wrongly | Not enough  details, no  example, no  comment | Correct, detailed explanations | 0.5 | | Correct, detailed explanations | |
| **Total** |  | 10 | Result | | | | 9.5 | |  | |

Questions 1 - 3: All written and completed by Lê Nguyễn Đăng Khoa - 523C0017

Questions 4 - 6: All written and completed by Huỳnh Nhật Huy

Questions 7 - 9: All researched and written with implementation by Tạ Vĩnh Khang - 523C0014

Formatting and editing done by Lê Nguyễn Đăng Khoa and Huỳnh Nhật Huy.