

Green University of Bangladesh
Department of Computer Science and Engineering
Midterm Exam (Assignment with rubrics), Fall 2021

Course Code: CSE 101	Time: 24 Hours
Course Title: Discrete Mathematics	Full Marks: 10

1. In how many ways a relation can be represented? State two different [CO1] 3
examples to represent each of them.

Marks	Level	Descriptions
3	Excellent	The ways of representation are written correctly. Also, described appropriately with examples of relation.
2	Good	The ways of representation are written perfectly. But the explanation is represented in the wrong way.
1	Poor	Only the ways of representation are written.

2. What is nested Quantifier? Is order important for nested quantifier? [CO2] 3
Explain your answer with appropriate example.

Marks	Level	Descriptions
3	Excellent	The definition of the nested quantifier is written appropriately. Also, the importance of order for nested quantifier is found perfectly.
2	Good	The definition of the nested quantifier is written correctly. Also, the explanation is shown accurately but the examples are not found with proper examples.
1	Poor	Only the definition of the nested quantifier is written correctly.

3. Use rules of inference to show that the hypotheses “If the weather is not too hot or not too cold, then the game will be held and a prize-giving ceremony will occur,” “If the game is held then the VC will give a speech,” “The VC did not give a speech,” imply the conclusion “The weather was too hot.” [CO2] 4

Marks	Level	Descriptions
4	Excellent	The compound propositions are written appropriately with appropriate logical connectives or operators both for the premises and conclusion. Besides, the steps and reasons for the proof of conclusion are written correctly by mentioning the names of the rules (Inference Rules) appropriately.
3	Good	The compound propositions are written appropriately with appropriate logical connectives or operators both for the premises and conclusion. Also, the steps and reasons for the proof of conclusion are written, but the rules' names (Inference Rules) are not mentioned appropriately.
2	Average	The compound propositions are written appropriately with appropriate logical connectives or operators for the premises and conclusion. But the steps and reasons for the proof of conclusion are not found correctly.
1	Poor	Only the propositions are written using propositional variables.