American International University-Bangladesh



Faculty of Science & Information Technology

Department of Computer Science SET C

CSC 3220 Compiler Design

Assignment-Final Summer 2020-2021

Total Marks: 20 Faculty: Nazia Hossain

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| **Student ID** |  | **Student Name** |  |  |

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| 1 | Construct DFA for following languages where alphabet is {0, 1}.   1. {w| w starts with a 11 and ends with 1} | 10 |
|  | **Steps to answer the question:**  Step-1: based on the language description prepare the regular expression.  Step-2: based on the regular expression construct the corresponding NFA using Thompson’s construction method.  Step-3: Using Subset Construction method draw the respective DFA |  |
| 2 | Using the following context free grammar check this input string **a\*b+** whether it is syntactically correct or not and why?  S → TS’  S’ → \*TS’ | +TS’| Î  T → a | b | 10 |