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|  | **BAHRIA UNIVERSITY,**  **(Lahore Campus)**  *Department of Computer Science*  **QUIZ# 02– Spring 2024** |

COURSE TITLE: **Compiler Construction**  COURSE CODE: **CSC-323**

Class: **BSCS- 5A** Shift: **Morning**

CLO#:  **2**

Course Instructor: Dr. Hajra Masood

Time Allowed: **30 minutes**

Date: **29th May 2024**

Max. Marks: **2.5 Points** Marks Obtained:

**Name: Reg No:**

**Question 1: Constructing a DFA for Language using Kleene Closure (**(𝑎𝑏)∗𝑎(𝑏𝑎)**)\* and Positive Closure (**(𝑎𝑏)∗𝑎(𝑏𝑎)**)+**

**Language** : Design a deterministic finite automaton (DFA) for the language described by the regular expression (𝑎𝑏)∗𝑎(𝑏𝑎) . The DFA should accept any string that consists of zero or more repetitions of the substring "ab", followed by 'a', and ending with one or more repetitions of the substring "ba". Provide the state diagram and the transition table for the DFA.