**IQRA NATIONAL UNIVERSITY, PESHAWAR**

# Compiler Construction

## Program: BSCS Major Assignment Semester: Fall-2020

## Maximum Marks: 30 ODD ROLL NUMBERS Time Allowed: 3 hrs

* 1. **Construct regular expression defining each of the following language over the alphabet Σ={a, b} .**
		1. **All words having odd length**
		2. **All words having at least two as and two bs**
		3. **All words having at least triple a or double b**
		4. **All words starts with double a or triple b. (10)**
	2. **For figure 3 if q0 is the initial state, the draw a transition table for it. (5)**
	3. **Define what is Finite Automaton. What can be the regular expression of the diagram given in figure 1. (5)**
	4. **Draw a transition table for the diagram given in figure 2. (0) is the starting state and (dotted lines) are the dead transition states which can be ignored. (10)**

**Figure 1:**

 y

a

 x **–**

b

Z+

a,b

a,b

**Figure 2:**



**Figure 3**