



**COMSATS Degree Programme**  
**COMSATS University Islamabad, Lahore Campus**

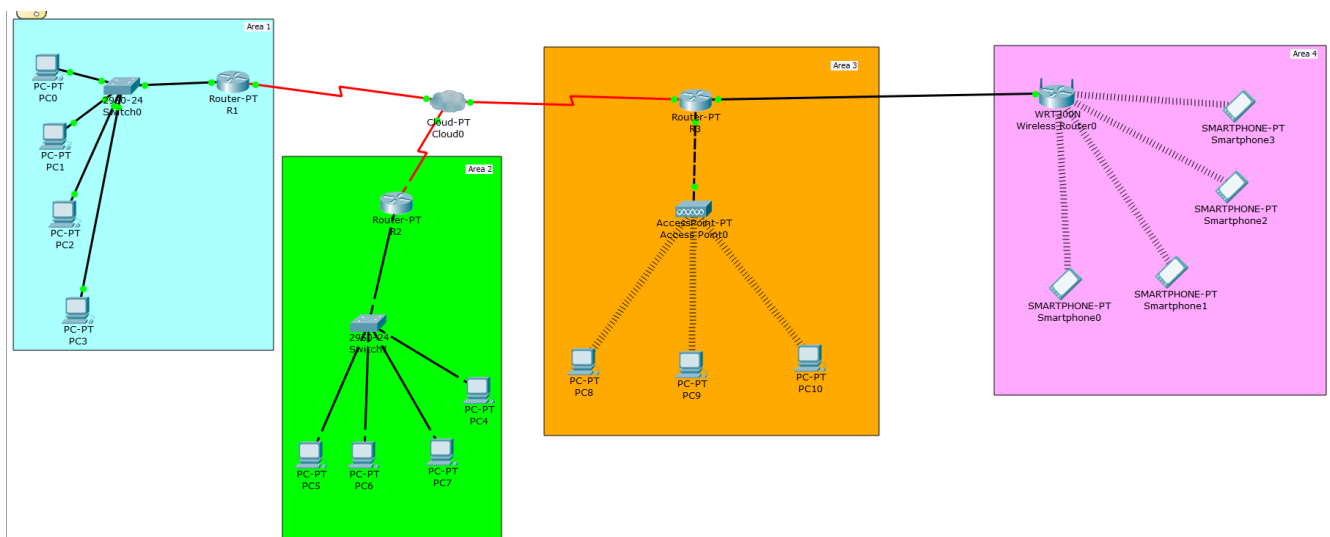
**Fall 2020**

**Terminal**

Course Title:	Data Communication and Computer Networks (Lab)				Course Code:	CSC339	Credit Hours:	4(3,1)	
Course Instructor/s:	Muhammad Junaid Anjum, Khurram Bajwa				Programme Name:	BS Software Engineering			
Semester:		Batch:	FA18-BSE-	Section:	A	Date:			
Student's Name:					Reg. No.			Marks:	60
<div><div>1. Read the below instructions carefully</div><div>2. No cheating. In case of caught, marks will be deducted</div><div>3. You are to create the code in a single text file. DONOT use Word. Upload the final file to CUOnline</div></div>									

**Question # 1:** Consider the given network diagram

[25 Marks]



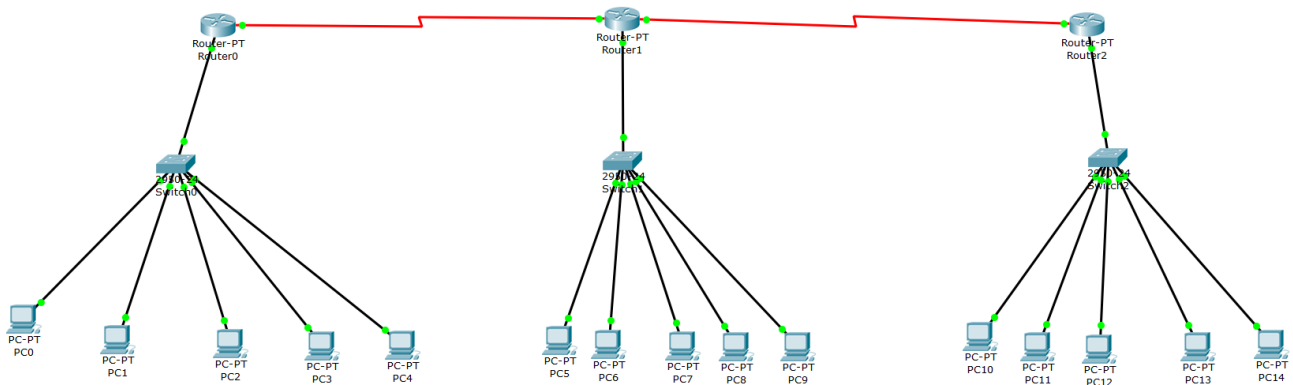
You are to apply the following (Please note that you MUST create notes on the packet tracer file which show the different IP addresses that you have applied. This is for both your and my help)

- You are to implement DHCP on every Router [2.5]
- You are to implement RIP on every Router [2.5]
- You are to create 2 VLANS in Area 2 and assign 2 PCs each, respectively. After that you must implement Inter-VLAN so that both VLANs can communicate with each other. [4]
- In Area 3, you are to implement a WLAN with a unique SSID on the AP along with a password [3]

- In Area 4, you are to implement WLAN with a unique SSID and a unique password. You are to also ensure that the broadcast of SSID of the wireless router is turned OFF. Adjust the devices accordingly [5]
- Finally, you are to create a Frame-Relay between Router 0, Router 1 and Router 2. You have the option of using either static or dynamic mapping for this matter. [8]

**Question # 2:** Consider the network diagram given below.

[15]



- You are to assign IP addresses to every device using Fixed Length Subnet Masking. The IP block provided to use is (172.16.0.0/16) [7.5]
- You are to also implement Point-to-Point Protocol between each router. Aside from that you are to also apply either PAP or CHAP authentication. [7.5]

**Question # 3:** You are to create a project using either Packet Tracer or NS2. The project should be a large-scale network like that of a 2-3 story bank or a campus network. You will have a viva conducted for your project. [20 Marks]