



**Daffodil International University**  
**Department of Computer Science and Engineering**  
**Faculty of Science & Information Technology**  
 Midterm Examination, Spring 2023  
**Course Code: CSE 313, Course Title: Computer Networks**  
 Level: 3 Term: 1 Batch: 58 and 59

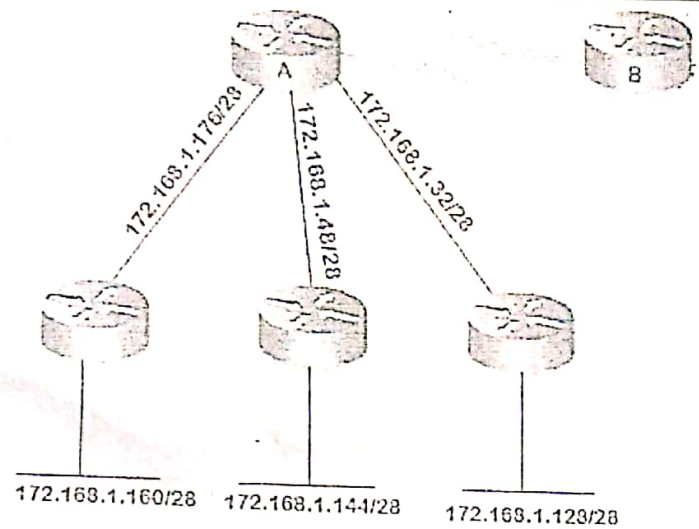
Time: 1.5 Hrs

Marks: 25

**Answer ALL Questions**

*[The figures in the right margin indicate the full marks and corresponding course outcomes.  
 All portions of each question must be answered sequentially.]*

1.	Suppose, you are a network administrator of an emerging Network company. You have been given an IP address of a network 125.0.0.0. You need to divide this network for five departments of your organization to support 980, 490, 120, 25 and 5 hosts. <b>Identify</b> each subnetwork's subnet mask, network address, broadcast address, first valid host and last valid host address.	10	CO3
2.	Consider the following diagram with the indicated link cost. Use Link State routing algorithm to discover the shortest path from router 1 to all destinations.	05	CO3
3.	From the following diagram, determine the Aggregated IP address, CIDR and mask from router A to router B.	05	CO2

 <p>The diagram illustrates a network topology. At the top center is Router A. Below it are three subnets, each represented by a vertical line connecting to a router icon. The subnets are labeled with their respective IP addresses and masks: 172.168.1.176/28 (left), 172.168.1.144/28 (middle), and 172.168.1.128/28 (right). Router A is connected to each of these subnets. To the right of Router A is Router B, which is not connected to any subnets in this diagram.</p>		
4. Explain the DNS name resolution techniques with suitable diagrams.	05	CO1