


Name:			
Enrolment No:			
UPES End Semester Examination, May 2024			
Course: Data and Network Security Program: BCA CSF Course Code: CSSF2011P		Semester: IV Time: 03 hrs. Max. Marks: 100	
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.	Questions	Marks	CO
Q1	Define: 1. Trapdoor 2. Logic Bomb 3. Spyware 4. Trojan	4	CO1
Q2	Explain the need of data erasure.	4	CO2
Q3	Find the subnets mask of 1024 subnets in class A?	4	CO3
Q4	Explain the difference between the HTTP and HTTPS.	4	CO2
Q5	Define what are some common security vulnerabilities found in web security?	4	CO1
SECTION B (4Qx10M= 40 Marks)			
Q6	Describe the common social engineering attacks related to data and network security.	10	CO2
Q7	In a block of addresses, we know the IP address of one host is 182.44.82.16/26. So, what is the first address and the last address in this block?	10	CO3
Q8	Explain the domain name system (DNS) with their types.	10	CO2
Q9	Describe the structure of an ICMP packet. Identify and explain the purpose of each field within the ICMP header. Illustrate your answer with a diagram.	10	CO1
OR			

	Discuss the process of frame forwarding in an Ethernet network. How does a switch use MAC addresses to determine the destination of a frame?		
SECTION-C (2Qx20M=40 Marks)			
Q10	<p>Defined IP Address along with the different classes of IP addresses and give the range of each class?</p> <p>You have an interface on a router with the IP address of 192.168.192.10/29.</p> <ol style="list-style-type: none"> i. Calculate the broadcast address the host will use on this LAN? ii. Find the range of addresses in blocks. iii. Find the last valid host. <p style="text-align: center;">OR</p> <p>The decision was made to place database hosts in their own VPC, and to set up VPC peering to different VPCs containing the application and web tiers. The application servers are unable to connect to the database. Explain which network troubleshooting steps should be taken to resolve the issue. Also, describe steps that must be taken to meet the retention needs in a scalable, cost-effective way.</p>	20	CO3
Q11	Explain the purpose and function of FTP in the context of file transfer over networks. Compare and contrast FTP with other file transfer methods such as HTTP and TFTP. Also, describe the purpose and function of SMTP in the context of email communication. Explain how SMTP facilitates the transmission of emails across networks.	20	CO1