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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
UNIVERSITY PRACTICAL EXAMINATIONS, NOVEMBER 2022
SUB. CODE & NAME: 18CSC302J – COMPUTER NETWORKS LABORATORY

In enterprise networks, Obtain DNS IP Address from ISP Using PPP where a local DNS server is not available, users are required to make use of the DNS service provided by the ISP or configure a freely available public DNS server. Demonstrate this configuration of Router using Cisco packet tracer to obtain Domain Name System (DNS) details from the Service Provider and passing it to the internal users using DHCP. The DNS protocol is used to resolve a Fully Qualified Domain Name (FQDN) to its corresponding IP address. Basically, the DNS protocol helps to resolve a human-readable hostname like www.google.com into its corresponding machine-readable IP address.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
UNIVERSITY PRACTICAL EXAMINATIONS, NOVEMBER 2022
SUB. CODE & NAME: 18CSC302J – COMPUTER NETWORKS LABORATORY

Build HDLC for establishing message passing topology and configuring HDLC in that Topology in Cisco Packet Tracer. Use six PC's two Routers and two Switches for the connection establishment.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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SUB. CODE & NAME: 18CSC302J – COMPUTER NETWORKS LABORATORY

Create a VPN tunnel between routers for safe communication using cisco packet tracer:

Total network to be take = 4.

network 192.168.1.0/24

network 192.168.2.0/24

network 1.0.0.0/8

network 2.0.0.0/8

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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Consider the scenario of a sender, which is a router that has received a datagram destined for a host in the same network. It is required to find the physical address of the host to communicate. Identify the applicable protocol in this scenario and execute the same.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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UNIVERSITY PRACTICAL EXAMINATIONS, NOVEMBER 2022
SUB. CODE & NAME: 18CSC302J – COMPUTER NETWORKS LABORATORY

Construct the network for communicating between two different networks with Static NAT configuration for Router0 connected with 3 pcs, Server. Inside and outside network connection needs to be configured with your local and global IP addresses. Configure the following using Cisco Packet Tracer

- Configure IP Routing on Routers
- Configuration and IP Routing on Routers
- Checks whether we are able to access the remote device or not and verify the translation on router
- Test the Static NAT Configuration by connecting from correct NAT device

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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UNIVERSITY PRACTICAL EXAMINATIONS, NOVEMBER 2022
SUB. CODE & NAME: 18CSC302J – COMPUTER NETWORKS LABORATORY

Write two programs: sender and receiver. The sender program reads the user keyboard input and sends it to the receiver program one character at a time. The receiver program reads the characters sent by the sender and prints them to the screen. Implement the above said concept with suitable protocol to send and receive data.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1**Examiner2**

R	A	2	0	1	1	0	0	3	0	1	0			
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In a client-server model, a server is an application program that offers a service over a network. The server's code runs first, which opens a port and accepts an incoming request. When a request arrives, it forms a response and returns the result to the requester. A program becomes a client when it sends a request to a server and waits for a response. Here, when a client is connected to a server. The server will send current time information to the client and the client will print the information on the screen. Implement this scenario using TCP protocol.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1**Examiner2**

R	A	2	0	1	1	0	0	3	0	1	0			
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Write a C / python socket program to implement a simple TCP Client-Server application, where the Client, on establishing a connection with the Server, sends a string to the Server. The Server reads the string and prints it.

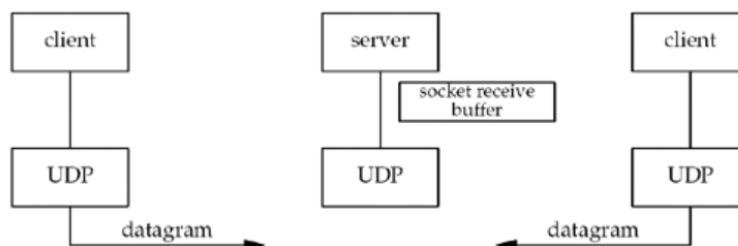
Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1**Examiner2**

R	A	2	0	1	1	0	0	3	0	1	0			
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Write an UDP echo client server application for the given scenario.



Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2

R	A	2	0	1	1	0	0	3	0	1	0			
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Build HDLC for establishing message passing topology and configuring HDLC in that Topology in Cisco Packet Tracer. Use six PC's two Routers and two Switches for the connection establishment.

Aim and Algorithm (5 Marks)	Program (10 Marks)	Output & Result (5 Marks)	VIVA (5Marks)	Total (25 Marks)

Examiner 1

Examiner2