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(Revision- 2021)

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE – APRIL - 2024

NETWORK SWITCHING TECHNOLOGIES

[Maximum Marks : 75] [Time : 3 hours]

PART–A

I. Answer **all** the following questions in one word or sentence. Each question carries 1 mark.

(9x1=9 marks)

		Module Outcome	Cognitive level
1	Tell the CIDR value for 255.255.255.0	M1.02	R
2	Find the default subnet mask for Class A address.	M1.01	R
3	The…….command is used to enter privileged mode from user mode	M2.02	R
4	Which command is used view configurations on a switch/router?	M2.05	R
5	List two ways to resolve hostnames to IP addresses.	M2.10	R
6	List any two VTP modes of operations.	M3.07	R
7	Define STP.	M3.09	R
8	Define ACL.	M4.02	R
9	What is an Internal Router?	M4.01	R

PART B

II. Answer **any Eight** questions from the following. Each question carries 3 marks.

(8x3=24 marks)

		Module Outcome	Cognitive level
1	What are the basic steps of subnetting?	M1.01	R
2	What is a subnet mask?	M1.01	R
3	How do you troubleshoot IP addressing issues in a network?	M1.07	R
4	How is the “interface” command used to configure network interfaces?	M2.02	R
5	Outline the purpose of the “description” command and how can it be used.	M2.03	U
6	Outline Trunk Port and how to configure it.	M3.04	U
7	What is EtherChannel?	M3.10	R
8	What is Perimeter Router, Firewall and Internal Router?	M4.01	R
9	Recall Extended Access List	M4.02	R
10	What are the types of NAT?	M4.03	R

PART C

Answer **all** questions from the following. Each question carries 7 marks.

(6x7=42marks)

		Module Outcome	Cognitive level
III	Construct **four** equal sized subnets using the **Class C** network address **192.168.20.0** with step-by-step explanation.	M1.03	A
	OR		
IV	Construct **four** equal sized subnets using the **Class B** network address **172.17.0.0** with step-by-step explanation.	M1.04	A
V	Illustrate configuration of Telnet on a switch/router. What are the general steps involved in the process?	M2.09	U
	OR		
VI	Summarize configuration of DNS on a switch/router. Also, write the steps for the same.	M2.10	U
VII	Outline how you use the 'ping' and 'traceroute' commands to diagnose and resolve network problems on a switch/router.	M2.11	U
	OR		
VIII	Summarize how to back up and restore OS on a switch/router.	M2.12	U
IX	Summarize three switch functions at Layer 2.	M3.01	U
	OR		
X	Outline three different ways to achieve routing between VLANs.	M3.05	U
XI	Identify how to configure a VLAN with an example.	M3.06	A
	OR		
XII	Make use of the steps to configure VTP.	M3.08	A
XIII	Summarize the steps to configure a Standard Access List.	M4.02	U
	OR		
XIV	Outline Dynamic NAT Configuration steps with an example	M4.05	U

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