DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2023

NETWORK SWITCHING TECHNOLOGIES

[Maximum Marks: **75**]   [Time: **3** Hours]

PART-A

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

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1.	Find the default subnet mask for Class B address.	M1.01	R
2.	Which command is commonly used to troubleshoot an IP network.	M1.07	R
3.	The ------ command is used to enter global configuration mode.	M2.02	R
4.	List any two Administrative Configurations commands.	M2.03	R
5.	Name any two Router / Switch Interfaces.	M2.06	R
6.	List any two functions of switch.	M3.01	R
7.	Define VLAN.	M3.04	R
8.	Name the two types of Access Lists (ACL)	M4.02	R
9.	Define NAT.	M4.03	R

PART-B

II. Answer any *eight* questions from the following. Each question carries *'three'* marks.

(8 x 3 = 24 Marks)

		Module Outcome	Cognitive level
1.	Recall subnetting and its purpose in computer networking?	M1.01	R
2.	What is Classless Inter-Domain Routing (CIDR)?	M1.02	R
3.	Recall Variable Length Subnet Mask (VLSM).	M1.06	R
4.	What is the difference between the "disable" and "logout" commands?	M2.02	R
5.	Tell the purpose of the "hostname" command, and how it can be used?	M2.03	R
6.	Outline Access Port and how to configure it.	M3.04	U
7.	Summarize the different modes of operation in VLAN Trunking Protocol.	M3.07	U
8.	What are the common security measures used to protect a LAN?	M4.01	R
9.	What is Standard Access List?	M4.02	R
10.	What are the uses of NAT?	M4.03	R

PART-C
Answer all questions. Each question carries *'seven'* marks

(6 x 7 = 42 Marks)

		Module Outcome	Cognitive level
III.	Construct **four** equal sized subnets using the **Class C** network address **192.168.10.0** with step-by-step explanation.	M1.03	A
	OR	M1.04	A
IV.	Construct **four** equal sized subnets using the Class B network address **172.16.0.0** with step-by-step explanation.		
V.	Show how to assign an IP address to a network interface?	M2.04	U
	OR		
VI.	Outline the different commands used to view, save, and erase configurations, and how are they used?	M2.05	U
VII.	Summarize the general steps involved in backing up and restoring the configuration of a switch/router.	M2.07	U
	OR		
VIII.	Show how you configure DHCP on a switch/router. Also, provide the general steps involved in the process.	M2.08	U
IX.	Explain how you configure switch port security.	M3.02	U
	OR		
X.	Identify how to do basic configurations of a network Switch.	M3.03	A
XI.	Summarize step-by-step operations of the Spanning Tree Protocol (STP).	M3.09	U
	OR		
XII.	Identify how to assign switch ports to VLAN.	M3.06	A
XIII.	Summarize the steps to configure an Extended Access List.	M4.02	U
	OR		
XIV.	Outline Static NAT Configuration steps with an example.	M4.05	U

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