

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

NETWORK ROUTING 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.	Name the two categories of Interior Gateway Protocols (IGP).	M1.01	R
2.	Write the syntax of 'ip route' command used in static routing.	M1.02	R
3.	Write the expansion of EIGRP.	M2.01	R
4.dynamic routing protocol uses Dijkstra's Shortest Path First algorithm	M2.03	R
5.	List any two types of routers in multi-area OSPF.	M3.01	R
6.	The size of IPv6 address is bits	M3.03	R
7.	List any two WAN topology options.	M4.01	R
8.	Name any two WAN Connection Types.	M4.01	R
9.	Write the expansion of the term GRE.	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.	What is 'default routing' and write a short note on it.	M1.02	R
2.	Write a short note on RIP.	M1.04	R
3.	List any three features of EIGRP and write a short note for each.	M2.01	R
4.	Tell what is OSPF.	M2.03	R
5.	Write a short note on Neighbour and Adjacency Initialization in OSPF.	M2.03	R
6.	Outline Adjacency Requirements in multi-area OSPF.	M3.01	U
7.	List five different types of Link-State Advertisements multi-area OSPF and draw the diagram which shows them all.	M3.01	R
8.	Compare DTE and DCE.	M4.01	U
9.	Define VPN.	M4.03	R
10.	Tell the three Cloud Service Models.	M4.06	R

PART-C

Answer all questions from the following. Each question carries 'seven' marks.

(6 x 7 = 42 Marks)

		<small>Module Outcome</small>	<small>Cognitive level</small>
III.	Outline the steps in IP routing process. OR	M1.01	U
IV.	Make use of RIP and show the configuration for a simple network.	M1.04	A
V.	Illustrate 'router-on-a-stick' inter-VLAN routing method with a diagram. OR	M1.05	U
VI.	Summarize the steps to configure Multilayer Switch Inter-VLAN Routing.	M1.06	U
VII.	Illustrate 'Neighbour Discovery' in EIGRP with diagram. OR	M2.01	U
VIII.	Make use of OSPF routing protocol and configure it for a simple single area network.	M2.04	A
IX.	Illustrate router roles in multi-area OSPF. OR	M3.01	U
X.	Make use of multi-area OSPF routing protocol and configure the same for a simple multi-area network.	M3.02	A
XI.	Summarize any seven features of IPv6 address. OR	M3.03	U
XII.	Illustrate the steps for two OSPF neighbour routers to become adjacent routers.	M3.01	U
XIII.	Illustrate GRE Tunnel with diagram. OR	M4.03	U
XIV.	Make use of Single-Homed EBGP and configure it for a simple network.	M4.04	A
