

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2024**

**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.	----- routing handles unknown destinations.	M1.02	R
2.	What is RIP?	M1.04	R
3.	----- is an advanced distance-vector routing protocol?	M2.01	R
4.	OSPF uses a metric referred to as -----.	M2.03	R
5.	Which router belongs to more than one OSPF area?	M3.01	R
6.	List any two IPv6 addressing types.	M3.05	R
7.	Name the two VPN categories based on their role in business.	M4.03	R
8.	----- is a technique for linking multiple networking switches together to act as a single switch.	M4.05	R
9.	Write the full form of APIC-EM.	M4.09	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.	List any three advantages of static routing.	M1.02	R
2.	What are the three different ways to enable routing between VLANs?	M1.05	R
3.	List any three features of EIGRP.	M2.01	R
4.	Outline the use of RTP protocol.	M2.02	U
5.	List the three OSPF protocol operations.	M2.03	R
6.	Outline Multi-Area OSPF.	M3.01	U
7.	Define IPv6 prefix.	M3.04	R
8.	Outline any one WAN connection type.	M4.01	U
9.	List any three benefits of VPN.	M4.03	R
10.	Outline the three cloud service models.	M4.06	U

**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.	Explain the IP routing process.  <b>OR</b>	M1.01	U
IV.	Explain three classes of dynamic routing protocol.	M1.03	U
V.	Identify the steps to configure static routes with the help of an example.  <b>OR</b>	M1.02	A
VI.	Identify the steps to configure Router-on-a-Stick Inter-VLAN routing with the help of an example.	M1.06	A
VII.	List the operations in EIGRP protocol.  <b>OR</b>	M2.01	R
VIII.	List the features of OSPF protocol.	M2.03	R
IX.	List the five Link State Advertisement types. Explain any two.  <b>OR</b>	M3.01	U
X.	Identify the steps to configure IPv6 static routing for a simple network.	M3.08	A
XI.	Make use of OSPF protocol and configure it for a Multi-Area network with the help of an example.  <b>OR</b>	M3.02	A
XII.	Explain any 7 features of IPv6.	M3.03	U
XIII.	List any 5 WAN topologies and explain any two.  <b>OR</b>	M4.01	U
XIV.	Explain the working of GRE Tunnels.	M4.03	U

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