



**B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2022**

(Regulation 2018)

Fifth Semester

**B.E-COMPUTER SCIENCE AND ENGINEERING**

**U18CSR5223 : CCNA – Enterprise Networking, Security & Automation**

**COURSE OUTCOMES**

- CO1:** Understand and configure dynamic routing protocol.  
**CO2:** Understand wide area networks and quality of service concepts.  
**CO3:** Understand software defined networks, virtualization and automation concepts.  
**CO4:** Ability to configure and troubleshoot enterprise networks.  
**CO5:** Ability to protect against cyber security threats.

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-  
 PART A (10 x 2 = 20 Marks)  
 (Answer not more than 40 words)**

- |   |     |                   |
|---|-----|-------------------|
| 1. How will OSPF elects the DR and BDR?   | CO1 | [K <sub>1</sub> ] |
| 2. “Multiaccess networks can create two challenges for OSPF regarding the flooding of LSAs”<br>List the challenges.   | CO1 | [K <sub>1</sub> ] |
| 3. List the commands that are particularly useful for verifying routing after configuring single-area OSPFv2.   | CO2 | [K <sub>1</sub> ] |
| 4. Identify the criteria used by a router derive the router ID?   | CO2 | [K <sub>3</sub> ] |
| 5. A vulnerability is a weakness in a system, or its design, that could be exploited by a threat.<br>Is it so? If yes, related your answer with justification | CO3 | [K <sub>2</sub> ] |
| 6. What is an asymmetric mathematical algorithm? Give an example.   | CO3 | [K <sub>1</sub> ] |
| 7. Explain the purpose of SNMP.   | CO4 | [K <sub>2</sub> ] |
| 8. List some advantages of Network Address Translation.   | CO4 | [K <sub>1</sub> ] |
| 9. Compare Enterprise-Managed VPNs and Service Provider-Managed VPNs.   | CO5 | [K <sub>4</sub> ] |
| 10. List some of the tools available to make configuration management easier.   | CO5 | [K <sub>1</sub> ] |

**Answer any FIVE Questions:-  
 PART B (5 x 16 = 80 Marks)  
 (Answer not more than 400 words)**

- |  |    |     |                   |
|--|----|-----|-------------------|
| 11. Examine the basic OSPF features and any eight characteristics. | 16 | CO1 | [K <sub>2</sub> ] |
| 12. a) Identify OSPF to propagate a default route.                 | 8  | CO1 | [K <sub>2</sub> ] |

	b)	Apply modifications to change the operation of single-area OSPFv2.	8	CO2	[K <sub>3</sub> ]
13.	a)	Explain the various tools that are used by a threat actor to exploit a vulnerability.	6	CO3	[K <sub>2</sub> ]
	b)	Consider yourself as an administrator of an IT company. Explain the best practices that might be adopted by you to protect your company's information and information system.	10	CO3	[K <sub>2</sub> ]
14.		Demonstrate how data can be secured using hashing and encryption.	16	CO2	[K <sub>2</sub> ]
15.	a)	Illustrate the process of Device Discovery with LLDP.	8	CO4	[K <sub>2</sub> ]
	b)	What is NTP? Examine the process of configuring and verifying NTP.	8	CO4	[K <sub>2</sub> ]
16.	a)	Define an API. List the types of Web Service APIs. Explain REST in detail.	8	CO5	[K <sub>2</sub> ]
	b)	Explain the purpose and characteristics of network virtualization.	8	CO5	[K <sub>2</sub> ]

\*\*\*\*\*