

B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023

(Regulation 2018)

Fifth Semester

COMMON TO ALL BRANCHES

U18CSR5223: CCNA - Enterprise Networking and Security Automation

COURSE OUTCOMES**CO1:** Understand and configure dynamic routing protocol.**CO2:** Understand wide area networks and quality of service concepts.**CO3:** Ability to protect against cyber security threats.**CO4:** Ability to configure and troubleshoot enterprise networks.**CO5:** Understand software defined networks, virtualization, and automation concepts.**Time: Three Hours****Maximum Marks: 100****Answer all the Questions:-****PART A (10 x 2 = 20 Marks)****(Answer not more than 40 words)**

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|---|-----|-------------------|
| 1. Demonstrate how to configure a Loopback Interface as the Router ID in OSPF | CO1 | [K ₃] |
| 2. Describe about the five different types of Link State Packets (LSPs) used by OSPFv2. | CO1 | [K ₂] |
| 3. Discuss about the various operational states of OSPF. | CO1 | [K ₂] |
| 4. Discuss about TCP SYN Flood Attack. | CO2 | [K ₂] |
| 5. Explain about Wildcard Masks in ACLs. | CO2 | [K ₂] |
| 6. Justify the need for ACLs. | CO2 | [K ₂] |
| 7. Discuss about the disadvantages of NAT. | CO3 | [K ₂] |
| 8. Justify the importance of network device documentation in troubleshooting. | CO4 | [K ₂] |
| 9. Compare Ansible, Chef, Puppet and SaltStack. | CO5 | [K ₃] |
| 10. Compare JSON,YAML and XML data formats | CO5 | [K ₃] |

Answer any FIVE Questions:-**PART B (5 x 4 = 20 Marks)****(Answer not more than 80 words)**

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|---|-----|-------------------|
| 11. Discuss about OSPF features and characteristics. | CO1 | [K ₂] |
| 12. Describe about the different types of social engineering attacks. | CO2 | [K ₂] |
| 13. Discuss about IPsec technologies. | CO3 | [K ₂] |
| 14. Demonstrate the Network Troubleshooting process with neat diagram | CO4 | [K ₃] |
| 15. Discuss about how the Network Automation is important. | CO5 | [K ₂] |

16. Discuss about REST API in detail. CO5 [K₂]

**Answer any FIVE Questions:-
PART C (5 x 12 = 60 Marks)
(Answer not more than 300 words)**

17. a) Discuss about Single-Area OSPFv2, With its features and characteristics. 6 CO1 [K₂]
b) Demonstrate the Configuration of point-to-point OSPF network. 6 CO1 [K₃]
18. a) Demonstrate the configuration steps for standard IPV4 ACLs. 6 CO2 [K₃]
b) Describe about the evolution of various penetration testing tools. 6 CO2 [K₂]
19. a) Explain about QOS Implementation techniques. 8 CO3 [K₂]
b) Discuss about various queueing algorithms. 4 CO3 [K₂]
20. a) Discuss about QOS models. 6 CO3 [K₂]
b) Describe about the tools used for Network Troubleshooting. 6 CO4 [K₂]
21. a) Demonstrate the steps involved in troubleshooting IP connectivity 8 CO4 [K₃]
b) Discuss about the symptoms and causes for Network problems related to ACL. 4 CO4 [K₂]
22. a) Explain about Software defined networks with different planes and its
Controllers 6 CO5 [K₂]
b) Discuss about benefits of virtual network infrastructure. 6 CO5 [K₂]
