**Tilak Maharashtra Vidyapeeth, Pune**

**BACHELOR OF COMPUTER APPLICATION (BCA-IMS)**

**CCNA 200-301 Marks:40**

1. Define OSI & TCP Model. (1 marks)
2. Explain various Network Devices. (1 marks)
3. Explain various Network Topologies. (1 marks)
4. Explain IP addressing technique. (1 marks)
5. Compare and contrast IPv6 address types. (1 marks)
6. Explain Ethernet networking. (1 marks)
7. Describe functions of Layer 2 Switches. (1 marks)
8. Explain VLAN concepts. (1 marks)
9. Explain Spanning-tree Protocol. (1 marks)
10. Describe and configure STP Protocols & features. (1 marks)
11. Explain and Configure Ether Channel. (1 marks)
12. Explain the Components of a Cisco router. (1 marks)
13. Explain Different working modes of a Cisco Router. (1 marks)
14. Describe Routing. (1 marks)
15. Explain different metrics. (1 marks)
16. Explain router lookup process and routing table. (1 marks)
17. Configure static and default routing. (1 marks)
18. Explain Routing Information Protocol (RIP). (1 marks)
19. Explain EIGRP. (1 marks)
20. Describe and verify OSPF. (1 marks)
21. Define Inter-VLAN Routing. (1 marks)
22. Describe and configure DHCP on Router. (1 marks)
23. Explain Redundancy and Load balancing. (1 marks)
24. Describe and configure NTP. (1 marks)
25. Describe and configure NAT. (1 marks)
26. Explain the fundamentals of WAN. (1 marks)
27. Explain the WAN Topology & Access connectivity. (1 marks)
28. Define the WAN devices and Protocols. (1 marks)
29. ExplainTunnelling over Internet. (1 marks)
30. Explain Single-homed branch connectivity using eBGP. (1 marks)
31. Define the QoS concepts. (1 marks)
32. Explain the Security Concepts in Network. (1 marks)
33. Define Layer 2 and 3 attacks. (1 marks)
34. Explain the Mitigate layer 2 attacks. (1 marks)
35. Explain the concepts of Basic Device Hardening. (1 marks)
36. Describe device security with AAA. (1 marks)
37. Describe ACL and configuration methods. (1 marks)
38. Configure & verify device monitoring protocols. (1 marks)
39. Configure & verify device management. (1 marks)
40. Troubleshoot network connectivity using ICMP based IP-SLA. (1 marks)