

Roll.No.

25UDSCT5006

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc.Cs with DS - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - V

25UDSCT5006 - Network Management

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Illustrate the Cisco Three-Layer Hierarchical Model and describe its advantages in network design.
2. Classify the different modes of the Cisco IOS Command-Line Interface (CLI) and describe their functions.
3. Examine OSPF areas and categorize the different types of OSPF areas.
4. Describe the operation of Hot Standby Router Protocol (HSRP) and illustrate its role in providing redundancy.
5. Define VLAN and demonstrate how Inter-VLAN routing is performed using a Layer 3 switch. Include relevant configuration commands.
6. Analyze the configuration steps of DHCP and Syslog in Cisco devices and summarize their significance.
7. Compare static routing with dynamic routing and justify where each method is suitable.
8. Distinguish between standard and extended Access Control Lists (ACLs) and determine their appropriate uses.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain the functions of each layer in the OSI Reference Model and illustrate their interactions with suitable examples.
10. Examine the Spanning Tree Protocol (STP) and justify its importance in preventing switching loops.
11. Evaluate the internal components of Cisco routers and switches and sketch a neat, labeled diagram to support your explanation.

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12. Analyze the working of EIGRP by describing its major features, operations, and verification commands.
13. Assess various network security mechanisms used to mitigate threats at the access layer and network perimeter, and recommend suitable measures.
