

Heaven's Light is Our Guide
Rajshahi University of Engineering & Technology
Department of CSE, Course No. - CSE 4104 (Sessional Based on CSE 4103)
4th Year Odd Semester Exam - 2024 (20 Series), Marks - 05 (CO2 → PO6 → K7 → P1, P2, P6)

Presentation Topic: “Understanding Static and Dynamic Routing (RIP) in Campus Networks: Ethical, Societal, and Environmental Considerations”

Scope / Guidelines:

1. Introduction

- Briefly describe a campus network connecting multiple departments.
- Introduce **static routing** (standard/default/floating) and **dynamic routing using RIP**.

2. Routing Basics and Ethical Considerations

- Explain how routing ensures **fair access** to all users.
- Discuss potential risks if misconfigured: downtime, misrouted data, or unauthorized access.

3. Societal Impact

- How routing affects students, faculty, and administration (e.g., exam systems, online resources).
- Simple examples: if RIP routing updates fail, some users may lose connectivity.

4. Environmental Considerations

- Discuss **energy consumption of routers and switches** depending on routing protocol and network traffic.
- Show how **static routing vs dynamic RIP routing** can impact energy usage:
 - Static routing: simpler, less CPU usage → lower energy.
 - RIP routing: periodic updates → higher CPU/network usage → more energy.
- Suggest **energy-efficient routing practices**, like optimizing routing updates or shutting down unused ports.

5. Best Practices / Solutions

- Compare **static vs floating vs RIP routing** in a simple table: reliability, ease of setup, and ethical considerations.
- Suggest strategies to **prevent network outages or misrouting**, such as monitoring routing tables regularly.

6. Conclusion

- Summarize key points: ethical, societal, and performance considerations.
- Recommendations for **simple, reliable, and fair routing** in campus networks.