

## Final Written Assessment Revision List - S2 2022

**UG total marks: 90**  
**PG total marks: 100**  
**9 multipart questions**

### Q1. Data Link Layer

**UG: 7-9 marks | PG: 10-12 marks**

**4-5 short answer question (concepts)**

Content:

- Lecture 2a - Data Link Layer
- Lecture 2b - Ethernet

### Q2. Network Layer

**UG: 10-12 marks | PG: 11-14 marks**

**5-6 short answer question (concepts and calculations)**

Content:

- Lecture 4a - Network Layer
- Lecture 4b - IPv4
- Lecture 10a - IPv6 Introduction
- Lecture 10b - IPv6 Address Type
- IP fragmentation Discussion in Canvas
- IPv6 addressing Discussion/Demo in Canvas
  - Abbreviation/Expansion
  - Subnet/Site/ISP/Registry prefix

### Q3. VLSM

**UG: 14-16 marks | PG: 14-16 marks**

**1 Scenario-based question (multipart)**

Content:

- Lecture 5a - IPv4 Subnetting
- Lecture 5b - IPv4 Subnetting Questions
- Lecture 5c - How To Subnet
- Lecture 6a - IPv4 Subnetting - VLSM
- VLSM Discussion/Demo in Canvas
  - Calculate Subnet/Broadcast Address
  - Calculate Subnet usable range
  - Calculate Subnet Mask (either notation)
  - Calculate unused range
  - From a given IP/mask, calculate subnet info

### Q4. Transport Layer

**UG: 7-10 marks | PG: 10-12 marks**

**1 Scenario-based question (multipart)**

**1-2 short answer questions (concepts)**

Content:

- Lecture 11a - Transport Layer
- Lecture 11b - Transport Layer - UDP
- Lectures 12a - Transport Layer - TCP
- Lectures 12b - TCP Flow Control
- TCP Discussion/Demo in Canvas:
  - 3-way handshake
  - Congestion window

### Q5. Generic Networking

**UG: 8-10 marks | PG: 8-10 marks**

**1 Scenario-based question (multipart)**

**1-2 short answer questions (concepts)**

Content:

- Lecture 4c - ARP
- Lecture 6b - Routing Between Networks
- Lecture 7a - Inter-VLAN Routing
- Inter-VLAN and Intra-VLAN Discussion/Demo in Canvas:
  - How many ARP requests?
  - Contents of ARP request?
  - Src/Dst MAC/IP
  - MAC address table content
  - Encapsulation protocol

### Q6. Spanning Tree Protocol

**UG: 8-10 marks | PG: 12-14 marks**

**1 scenario based question (multipart)**

**1-2 short answer questions**

**OR**

**4-5 short answer questions**

Content:

- Lecture 8a - Layer 2 Redundancy
- Lecture 8b - Spanning Tree Protocol
- Lecture 8c - Spanning Tree Protocol - Advanced
- STP topology Discussion/Demo in Canvas

### Q7. LAN design and Link Aggregation

**UG: 7-9 marks | PG: 7-9 marks**

**3-4 short answer questions (concepts)**

Content:

- Lecture 7b - LAN Design
- Lecture 9a - Link Aggregation

### Q8. Ethernet Switching and VLANs

**UG: 13-15 marks | PG: 13-15 marks**

**1 Scenario-based question (multipart)**

**3-4 short answer questions (concepts)**

Content:

- Lecture 2c - Ethernet Switching
- Lecture 3a - VLANs
- Lecture 3b - Switch Configuration - Best Practices
- Lecture 7a - Inter-VLAN routing
- Routing-on-a-Stick Demos In Canvas

### Q9. Wireless Networks

**UG: 7-8 marks | PG: 8-9 marks**

**3-5 short answer questions (concepts)**

**OR**

**1 Scenario based question (multipart)**

**1-2 short answer questions (concepts)**

Content:

- Lecture 9b - Wireless Concepts
- Lecture 9c - Wireless Networks
- Lecture 9d - Wireless Security