

School of Computing and Information Technology

CSIT985 Strategic Network Design Wollongong Campus

Sample Examination Questions Spring Session 2021

Exam duration	3 hours
Weighting	40%
Items permitted by examiner	<i>Open Book</i>
Directions to students	Real exam format will be including

10 (ten) Short Answer questions to be answered
Each question is worth 3 marks.

1 (one) Essay question to be answered
Essay question is worth 10 marks.

Each Question will be on a separate quiz page

This document is a sample of questions only, it is not a sample of final exam so it is organised according to chapters.

The real exam questions may be coming from different chapters and each chapter may have different number of questions.

Note: The sample questions are not necessarily the same questions to be tested in real exam. They are just samples.

Planning Teams and Strategic Planning

1. Explain how three (3) of the following questions can be used to determine whether or not a strategic plan should be developed (Three options per exam question)
 - a. What purpose will the strategic plan serve?
 - b. How will it help the organization?
 - c. Will it be better than the system we use now?
 - d. Are those in leadership positions committed to strategic planning?
 - e. How much will it cost in terms of time and personnel effort?
 - f. Who should be on the planning team?
 - g. Does anyone have experience with strategic planning?
 - h. What overriding crises would inhibit our ability to plan?
2. Describe three (3) factors as discussed in lectures that should be considered when choosing a strategy.

Chapter One

1. As discussed in lectures, what is the difference between network analysis and network architecture
2. Service requirements flow from user to application to device to network, becoming more specific along the way. If you were given an application requirement for end-to-end delay (e.g., 100 ms) between an application server on one network and users on another network, for example, how might that translate into delay in the network and devices? What types of service metrics could you use to measure it?
3. Bandwidth is one resource that needs to be considered in network design. Identify and briefly describe three (3) other resources that must be considered in network design.

Chapter Two

1. Give an example of a requirement as it flows from user to application to device to network. Show how it becomes more technical at each component.
2. Why is requirements analysis important to network architecture and design? Provide three (3) reasons.

Chapter Three

1. Describe how the delay characteristics of applications combined with user expectation can be used to set service level thresholds
2. Why is it important to consider frequency and duration for application transactions when characterising application behaviour?

Chapter Four

1. Using examples describe three (3) flow models discussed in lectures.

2. Briefly describe how flows can be used to divide a network into regions.

Chapter Five

1. What is a component architecture?
2. Describe three (3) internal interactions of a component architecture as discussed in lectures
3. Using examples describe briefly the types of external relationships that should be considered for each of the component architectures discussed in lectures.

Chapter Six

1.
 - a. Describe briefly how subnetting works. (1.5 marks)
 - b. What is variable length subnetting (1.5 marks)
2. Define the following addressing terms
 - a. Local address
 - b. Private address
 - c. Temporary address

Chapter Seven and Eight

1. Describe the difference between end-to-end characteristics and per link/network/element characteristics.
2. Identify and briefly describe three (3) areas of network performance as discussed in lectures
3. Using diagrams show how application knowledge, such as capacity requirements can be used to determine performance thresholds

Chapter Nine

1. Describe three (3) classic security considerations as discussed in lectures
2. As discussed in lectures what are network security policies and procedures designed to accomplish?

Chapter Ten

1. Describe three technology evaluation criteria discussed in lectures.

Essay Sample

Describe three (3) concept elements of an architectural network design