



Faculty Name: IT
Qualification Name: FET
Certificate: Information
Technology: System
Development
Programme Name:
Programming Foundation
Formative Assessment
1 Paper

0861 100 395 | ENQUIRY@CTUTRAINING.CO.ZA | CTUTRAINING.AC.ZA

Table of Contents

Formative Assessment 1 Paper	2
Instruction(s) to Students.....	2
Scenario Question(s) 100 Marks.....	3

Formative Assessment 1 Paper

Faculty Name:	Information Technology
Qualification Name:	FET Certificate: Information Technology: System Development
Programme Name:	Programming Foundation
Module Name:	Ethics and Network Architecture Semester 2
Module Code:	CWD412
Hand Out:	15 – 03 – 2024
Hand In:	05 - 04 - 2024
Total Marks:	100
Examiner:	Mr Junior Manganyi
Resources Required:	None

Scenario Question(s)	100 Marks
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This Formative Assessment 1 (FA1) contributes 33% towards the final mark.

Instruction(s) to Students

1. All assessments are due at 23:30 (local time) on the specified date.
2. Copying from any source, including other students' work, is strictly prohibited. Plagiarism will result in disciplinary action.
3. Before submitting your assessment, download the "Declaration of Authenticity" form provided from Campus Online. Sign the form and include it as part of your submission.
4. Late submissions will be accepted within a three-day grace period after the closing date. However, there will be a deduction in marks:
5. On the first day, a 5% deduction will be applied, From the second day onwards, the deduction will be 1% per day, up to a maximum deduction of 15%.
6. If you need to submit your assessment during the grace period, you must inform your facilitator.

It is your responsibility to ensure that you have access to a reliable internet connection and the necessary resources to complete and submit your assessment on time.

Scenario Question(s)

100 Marks

Project: Comprehensive Assessment on Internet Ethics and Networking Concepts

Scenario:

You have been appointed as the Chief Technology Officer (CTO) of a rapidly growing tech startup. The company operates in the online space and offers various services through the Internet. As the CTO, you are responsible for ensuring that the organization adheres to ethical principles, complies with Internet regulations, and maintains a robust network infrastructure based on the OSI model.

Unit 1: The Internet and Ethical Values (Total Marks: 30)

- Define Internet Ethics and provide three examples of ethical dilemmas related to online behavior. (6 marks)
- Discuss the importance of privacy in the digital age and outline three best practices to protect users' data. (8 marks)
- Evaluate the impact of social media on society and discuss two potential ethical concerns arising from its usage. (8 marks)
- Analyze the role of fake news and disinformation in the online world, and propose two strategies to combat their spread. (8 marks)

Unit 2: Regulating and Governing the Internet (Total Marks: 30)

- Explain the concept of net neutrality and discuss its significance in ensuring an open internet. (8 marks)
- Compare and contrast two different models of internet regulation used by governments globally. (8 marks)
- Investigate the implications of the General Data Protection Regulation (GDPR) on businesses operating online and outline three measures to comply with it. (8 marks)
- Describe the responsibilities of Internet Service Providers (ISPs) in upholding Internet regulations and ensuring user safety. (6 marks)

Unit 3: Understanding Local Area Networking (Total Marks: 20)

- Define Local Area Network (LAN) and provide two practical examples of where LANs are commonly used. (6 marks)
- Explain the differences between a hub, switch, and router, and describe their specific roles within a LAN. (8 marks)
- Design a basic LAN setup for a small office with five computers, ensuring proper IP addressing and connectivity. (6 marks - practical question)

Unit 4: Defining Networks with the OSI Model (Total Marks: 20)

- Describe the OSI model and its seven layers, providing an example of a function performed at each layer. (10 marks)
- Troubleshoot a hypothetical network issue, where a computer cannot connect to the internet, by systematically applying the OSI model's layers for problem-solving. (10 marks - practical question)

[Total = 100 Marks]

End of Formative Assessment 1