



PAC INSTITUTE OF TECHNOLOGY AND SOCIAL STUDIES JAN – APRIL 2025 ASSESSMENT

FORMATIVE ASSESSMENT

Qualification / Course : COMPUTER SCIENCE LEVEL 6

Unit of Competency : DEVELOP AN INFORMATION SYSTEM

WRITTEN ASSESSMENT TIME: 3 HOURS

INSTRUCTIONS TO THE CANDIDATE:

- 1. Read all the instructions carefully before attempting the questions.*
- 2. This paper consists of two sections, A & B.*
- 3. You are allowed 3 Hours to Answer the questions.*
- 4. Marks for each question are indicated in brackets.*
- 5. Write your responses in the Separate Answer booklet provided.*
- 6. Do not write anything on this question paper.*

SECTION A: (40 MARKS)

Answer ALL the questions in this section

1. Describe **THREE** reasons why information systems are so important for modern computing and business today. (3 Marks)
2. Information provides historical evidence and reduces uncertainty when making decisions. State any **FIVE** qualities of good information. (5 Marks)
3. Highlight **THREE** principles of interface design as used in Human computer interaction. (3 Marks)
4. Discuss **THREE** benefits of scaling Rapid Application Development methodologies for large projects or organizations. (6 Marks)
5. Hope a UX designer has been tasked with creating the user interface of a mobile application. Highlight **FOUR** interaction styles used in HCI that she should consider to enhance user engagement and satisfaction. (4 Marks)
6. Outline **FOUR** important benefits of Management Information Systems (MIS) as a strategic tool within an organizational information system. (4 Marks)
7. Lynn, a banker at Fadhili bank has been approached by a customer who wants to check his recent bank transactions for the past 2 weeks.
 - a) Identify the type of information system she is likely to use to provide the information needed by the customer. (1 Mark)
 - b) State **THREE** functions of the information identified 7 a) above. (3 Marks)
8. Outline **THREE** control structures applied in VB.Net. (3 Marks)
9. Radio buttons and checkboxes are interactive controls used in VB.NET applications. Discuss **TWO** differences between them. (4 Marks)
10. Glory, a system administrator for Fariji Communications Limited, is tasked with understanding and optimizing the integration of information system components. State **FOUR** components of an information system that she needs to consider. (4 Marks)

SECTION B: (60 Marks)

Answer any THREE questions in this section

11.

a) Describe **TWO** circumstances under which it is recommended to utilize Agile, particularly the Scrum framework. (4 Marks)

b) Explain **THREE** importance of documentation in software development life cycle.

(6

Marks)

c) Emmanuel, a SCRUM master has been consulted by Rafiki Investments Limited to facilitate the development of an Agile system for their insurance agency. Explain **FIVE** differences between Agile Development as compared to Waterfall methodology. (10 Marks)

12.

a) Computer-Aided Software Engineering (CASE) tools provide automated assistance during software development and enhance the quality of systems developed. Explain **THREE** important modelling techniques used in software development for analysing and building information systems. (6 Marks)

b) The SDLC provides a framework for a product team to manage the development process systematically, with clear goals and deliverables at every stage. Discuss **SEVEN** phases of a software development lifecycle that a product team should consider to successfully guide the entire project to completion. (14 marks)

13.

a) The need for deliberate computer design is more crucial than ever as technology continues to advance throughout the twenty-first century. Explain **FIVE** benefits of HCI in personalizing interaction tools and processes. (10 Marks)

b) TVET authority has been meaning to improve its information security management system to adapt to the evolving landscape of technology. Discuss **FIVE** emerging trends it should consider when improving their system. (10 Marks)

14.

a) Explain the following terms as applied in VB.Net programming language. (10 Marks)

i) Object

iii) Method

ii) Property

iv) Event

v) Class

b) Mouse events and keyboard events are important event handling techniques used in **VB.NET**.

Write VB.Net code for each of the following event handling functions. (10 Marks)

i) MouseDown

ii) MouseUp

iii) MouseHover

iv) KeyUp

v) KeyDown