



# MANICALAND STATE UNIVERSITY OF APPLIED SCIENCES

## FACULTY OF ENGINEERING, APPLIED SCIENCES AND TECHNOLOGY

DEPARTMENT: COMPUTER SCIENCE AND INFORMATION SYSTEMS

MODULE: MOBILE COMPUTING

CODE: INSY422

SESSIONAL EXAMINATIONS  
OCTOBER-2023

DURATION: 3 HOURS

EXAMINER: MR T.S MUWANI

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### INSTRUCTIONS

- 1. Answer Any **five (5)** questions.*
- 2. Start a new question on a fresh page.*
- 3. Total marks 100.*

*Additional material(s): None*

### **Question 1**

Describe the following terms in detail:

- a) Corresponding Node [5 marks]
- b) Care of Address [5 marks]
- c) Agent Discovery [5 marks]
- d) Tunneling and Encapsulation [5 marks]

### **Question 2**

- a) Demonstrate the workings of mobile IP with the help of a diagram.  
[10 marks]
- b) Discriminate in detail about traditional IP and how it differs from mobile IP.  
[10 marks]

### **Question 3**

- a) Express a brief account of route optimization in mobile IP. [10 marks]
- b) What do you mean by agent solicitation? [5 marks]
- c) Point out the meaning of 'Slow Start' in mobile computing. [5 marks]

### **Question 4**

Explain the layered architecture of the TCP/IP protocol suite and compare it with the ISO/OSI architecture. [20 marks]

### **Question 5**

Modify the normal TCP to M-TCP for working efficiently in a wireless mobile network. [20 marks]

**Question 6**

Formulate a plan to create a mobile IP along with the basic requirements.

[20 marks]

**Question 7**

Assess why congestion occurs in a network.

[20 marks]

**END OF EXAMINATION**