



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS  
2021 ACADEMIC YEAR**

**THIRD YEAR EXAMINATIONS  
BACHELOR OF COMPUTER SCIENCE**

**COURSE CODE: BIT 321E**

**COURSE TITLE: SNMP PROTOCOLS**

**DATE: Wednesday 27<sup>th</sup> April, 2022      TIME: 8.00a.m. – 10.00a.m.**

---

---

**INSTRUCTIONS TO CANDIDATES**

Question ONE (1) and Any OTHER 2 questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

**Question 1 30 MARKS**

- a) I) list 2 network management protocols 3 marks
- ii) state the information provided by these protocols 3 marks
- b) How can a network be certified as an effective network? What are the factors affecting them? 6 marks
- c) Explain the SNMPv3 authentication protocol? 6 marks
- d) State what protocol can cause overload on a CPU of a managed device 3 marks
- e) in an MIB View Semantics explain i) OBJECT IDENTIFIER ii) SNMP-COMMUNITY-MIB iii) SNMP-USER-BASED-SM-MIB 9 marks

**Question 2 20 marks**

- a) Define Round Trip Time? 6 marks
- b) What is the difference between Firewall and Antivirus? 4 marks
- c) In a GLBP network, who is responsible for the ARP request 4 marks
- d) Explain the meaning of a Remote Procedure Call or RPC 4 marks
- e) the difference between these three: encryption, encoding, and hashing? 3 marks

**Question 3 20 marks**

- a) State the ports used by SNMP i) agents ii) managers 4 marks
- b) Explain the The “gear “ of a network admin 10 marks
- c) give a list of 3 priorities concerning network support 6 marks

**Question 4 20 marks**

- a) How can you recover the data from a system which is infected with a Virus? 8 marks
- b) A network administrator is analyzing the features supported by the multiple versions of SNMP. What are two features that are supported by SNMPv3 but not by SNMPv1 or SNMPv2c? 6 marks

c explain the protocol or service that can be configured to send unsolicited messages to alert the network administrator about a network event such as an extremely high CPU utilization on a router? 6 marks

**Question 5 20 marks**

- a) Explain the function of the MIB element as part of a network management system? 4 marks

b) Describe the SNMP version that uses weak community string-based access control and supports bulk retrieval? 6 marks

c) Describe 2 network administrator commands issued on a router: 4 marks

d) list 3 Data Types used in all versions of SNMP. 6 marks