



**GRETSA UNIVERSITY**  
**SCHOOL OF COMPUTING AND INFORMATICS**  
**JANUARY - APRIL 2023 - ASSIGNMENT**

**COURSE CODE: BSCS 302**

**COURSE TITLE: DATA COMMUNICATION AND NETWORKS**

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1. Explain how a cost-conscious business with multiple sites might benefit from using the Internet as a public network to provide WAN connectivity between its sites. Detail the technical considerations, technologies and security operation necessary to utilise this option  
(7 marks)
2. Lenox, a network consultant was hired by a certain company to troubleshoot the slow speed of company's computer network. Explain four possible causes of the problem that she is likely to encounter.  
(4 Marks)
3. Outline three challenges facing computer network professionals as a result of emerging trends in data communication.  
(3 Marks)
4. Discuss some of the threats and vulnerabilities in a networked system, recommending some of the counter measures to protect or limit their effect.  
(7 marks)
5. With reference to the client-server paradigm, explain how Gretsa university students are able to access online learning remotely from home  
(4 Marks)
6. XYZ Company intends to layout its network infrastructure and link up all operations. You are required to list and describe all the necessary hardware and software required for this undertaking.  
(7 mks)