



***"Investing in Africa's Future"***

**COLLEGE OF BUSINESS PEACE, LEADERSHIP AND GOVERNANCE**

**NSCE 302: SOFTWARE ARCHITECTURE AND DESIGN**

**END OF FIRST SEMESTER EXAMINATIONS**

**NOVEMBER 2022**

**LECTURER: MR T.S MUWANI**

**DURATION: 3 HOURS**

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### **INSTRUCTIONS**

Answer **ANY FOUR** Questions  
Total possible mark is 100

Start **each** question on a new page in your answer Booklet.

#### **Question 1**

- a) Explain the term 'architecture of the application'? [6 marks]
- b) What is software and why is it important? [10 marks]

- c) Differentiate between the terms **Design Patterns, Framework** and **Architecture** [9 marks]

**Question 2**

- a) Discuss the procedures for defining architecture. [24 marks]  
b) How can you persuade upper management to invest in architecture?  
[1mark]

**Question 3**

- a) Interpret how do you gather needs from your customer?[10 marks]  
b) What are the criteria for components? [10 marks]  
c) Define event driven programming? [5 marks]

**Question 4**

- a) Why would someone want to create an application employing a 3-tier structure? [6 marks]  
b) Explain middleware? [5 marks]  
c) Illustrate the Model-View-Controller (MVC) architecture.[14 marks]

**Question 5**

- a) Examine the migration process for applications? [10 marks]  
b) Using an example, distinguishes a class from an object [15 marks]

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**END OF PAPER**