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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2022/2023 ACADEMIC YEAR**  
**SECOND YEAR, FIRST SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(COMPUTER SCIENCE AND MATHEMATICS)**

Date: 1<sup>st</sup> August, 2022  
Time: 2.30 – 4.30pm

**KCS 205 - SYSTEMS ANALYSIS AND DESIGN**

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) Elucidate two methods that can be used when implementing a new system to an organization.  
(4 marks)
- b) Explain the responsibilities of the following system project team skills.
  - i) System sponsor
  - ii) System auditor(6 marks)
- c) State and explain the three most common methods of system investigation used during data collection to develop a system.  
(6 marks)
- d) Explain six duties played by system designer.  
(6 marks)
- e) Explain any four types of feasibility that should be carried out by a systems developer.  
(8 marks)

**QUESTION TWO (20 MARKS)**

- a) State six major types of business information systems.  
(6 marks)
- b) Distinguish between functional system requirement and non-functional system requirements; give examples in each of them.  
(6 marks)
- c) Briefly discuss the activities that a system developer has to undergo during system development life cycle.  
(8 marks)

### **QUESTION THREE (20 MARKS)**

- a) Discuss different control measures you will take into account in order to protect the system from theft, unauthorized access and modifications, and accidental or unintentional damage.  
(6 marks)
- b) Explain what a prototype is and describe how it can be used in requirements gathering.  
(6 marks)
- c) Explain any four advantages of Spiral model approach as used in systems development.  
(8 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Explain different factors to consider when designing an effective questionnaire during system planning.  
(6 marks)
- b) The formal system documentation fulfills different objectives. Explain any six of these objectives.  
(6 marks)
- c) Describe the four types of systems maintenance.  
(8 marks)

### **QUESTION FIVE (20 MARKS)**

- a) Explain reasons as to why conducting feasibility study is important when developing a system.  
(6 marks)
- b) Explain different factors that the system developer involves during the system design phase.  
(6 marks)
- c) By use of a well-drawn diagram to describe how parallel model methodology of developing systems works.  
(8 marks)