KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

**SECOND YEAR EXAMINATION FOR THE AWARD OF THE
DIPLOMA IN INFORMATION TECHNOLOGY
FIRST SEMESTER, 2023/2024
(AUGUST-DECEMBER, 2023)
DIT 0203: SOFTWARE ENGINEERING**

STREAM: Y2 S1	**TIME: 2 HOURS**
DAY: WEDNESDAY, 12.00 -2:00 PM	**DATE: 29/11/2023**

INSTRUCTIONS
1. Do not write anything on this question paper.
2. Answer Question ONE [Compulsory] and any other TWO Questions.

QUESTION ONE [30 marks]
(a) What is a software development model?   [2 marks]
(b) State and explain   four attributes of a good software   [10 marks]
(c) Define Software Engineering   [2 marks]
d) Discuss the various phases of SDLC   [10 marks]
e) Distinguish Between Functional and Non-functional Requirements
                                                                                                [2 marks]
f) What is feasibility study   [2 marks]
g) List any two project management tools   [2 marks]

QUESTION TWO [20 marks]

(a) Describe in details where possible diagrammatically the following
    software development process models giving their advantages and
    disadvantages
  (i)   Waterfall model   [5 marks]
  (ii)   Spiral model   [5 marks]
  b) Discuss any FIVE project management tools   [10 marks]

QUESTION THREE [20 MARKS]
   (a) Discuss Five functions of project management   [10 marks]
   (b) Discuss the benefits of using the SDLC   [10 marks]
QUESTION FOUR [20 marks]
   (a) Discuss four types of maintenance   [8 marks]
   (b) Distinguish between software validation and verification   [2 marks]
   (c) Risk management is an essential part of project management. Describe
       three typical risks that can occur in a software project, and for each
       suggest two possible countermeasures.   [10 marks]
QUESTION FIVE
   a) Discuss the spiral software process models using a diagram and
      evaluate its applicability in software development.   [10 mark]
   b) With the aid of well labeled diagrams Explain Software Design tools
                                                                       [10 marks]