KIBABII UNIVERSITY

(KIBU)

UNIVERSITY EXAMINATIONS

2019/2020 ACADEMIC YEAR

SPECIAL/SUPPLEMENTARY EXAMINATIONS

YEAR ONE SEMESTER ONE EXAMINATIONS

FOR THE DEGREE IN SCIENCE AND MATHEMATICS [SMA]

COURSE CODE : CSC 315

COURSE TITLE   : SOFTWARE ENGINEERING

DATE: 04/02/2021   TIME: 2.00 P.M – 4.00 P.M

INSRUCTIONS TO CANDIDATE

ANSWER **QUESTION ONE** AND **ANY OTHER TWO**

QUESTION ONE [COMPULSORY][30MARKS]

a) What is software engineering? [2 marks]

b) Define the following terms as used in software engineering

   (i)   Software evolution [2 marks]

   (ii)   Coupling [2 marks]

   (iii)   Cohesion [2marks]

c) A software product can be judged by what it offers and how well it can be used.
Discuss [6 marks]

d) What is software development paradigm? [3 marks]

e) Discuss any two software evolution laws [4 marks]

f) Discuss Specialized process model [5 marks]

g) Outline four advantages of using agile process model [4 marks]

QUESTION TWO [20MARKS]

a) Define the term software project [2 marks]

b) Discuss the software development life cycle [9 marks]

c) Briefly discuss the following

   (i)   Function oriented design [2 marks]

   (ii)   Object oriented design [2 marks]

d) Define the term Modularization and give any two advantages of using it [3 marks]

e) What is a decision table? [2 marks]

QUESTION THREE [20MARKS]

a) What is software prototyping? [1 mark]

b) Give any three reasons for software prototyping [3 marks]

c) Describe the four phases of prototyping [4 marks]

d) What is software requirement specification? [3 marks]

e) Briefly discuss the tasks involved in requirement engineering [7 marks]

f) Outline any two advantages of using incremental process model [2 marks]

QUESTION FOUR [20MARKS]

a) Discuss throw- away prototyping [4 marks]

b) What is software testing? [2 marks]

c) Explain black-box testing [3 marks]

d) Describe the tests performed during system testing [6 marks]

e) (i) Define the term programming methodology [1 marks]

   (ii)Describe any two programming methodologies [4 marks]

QUESTION FIVE [20MARKS]

a) What are the reasons for software verification? [3 marks]

b) Discuss white box testing techniques [4 marks]

c) Differentiate between alpha testing and beta testing [4 marks]

d) What are CASE tools? [2 marks]

e) Discuss the components of CASE tools [4 marks]

f) Briefly explain any three types of CASE tools [3 marks]