JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS: 2013/2014
IIT 2124 SOFTWARE ENGINEERING ESSENTIALS

DIPLOMA IN IT

DATE: APRIL 2014 **TIME: 2 HOURS**

INSTRUCTIONS:
Answer ALL QUESTIONS ONE AN OTHER TWO QUESTIONS

QUESTION ONE (30 Marks)

(a)	Explain the following software attributes	(8marks)
(i)	Reliability	
(ii)	Portability	
(iii)	Robustness	
(iv)	Efficiency	
(b)	Explain the difference between software engineering and system engineering	(2 marks)
(c)	Describe the differences between software products and hardware products	(4marks)
(d)	Explain the following types of feasibility studies	(4marks)
(i)	Economic feasibility	
(ii)	Political feasibility	
(iii)	Operational feasibility	
(iv)	Technical feasibility	
(e)	Define the following as applied to project management	(6mrks)
(i)	Project manager	
(ii)	Work break down structure	
(iii)	Project management	
(iv)	Technical lead	
(v)	Functional lead	
(vi)	Resource	
(f)	Distinguish between functional and non-functional requirements.	(4marks)
(g)	Explain evolutionary development in software process models.	(2marks)

SECTION B (ANSWER ANY TWO QUESTIONS)

QUESTION TWO 20 MARKS

(a)) (i)	Define software process.	(5marks)
(ii)	Explain five characteristics of the software process.	(10 marks)
(b)	Discuss the Waterfall model of software development.	(5 marks)

QUESTION THREE 20 MARKS.

(a) What is the difference between Engineering and science?	(2 marks)
(b) Explain the following software qualities giving examples in each case	(8 marks)
(i) Usability.	
(ii) Interoperability	

(iii) Reusability
(iv) Portability

(c) Explain any five software development principles (10 marks)

QUESTION FOUR 20 MARKS

(a)

(i) Explain initiation in project management process (5 marks)

(ii) Describe the five activities that must be performed during this phase (5marks)

(b) With the use of well illustrated diagrams, describe how representation and scheduling of project plans can be done. (10 marks)

QUESTION FIVE 20 MARKS

(a)

(i) Explain the concept of Object Oriented Analysis and design (6 marks)

(ii) Differentiate between Encapsulation and Modularity giving examples in each case. (4marks)

(b)

(i) Define software reuse (3 marks)

(ii) Explain five quality improvements benefits for software reuse. (5marks)

(c) Explain two Conceptual and Technical Obstacles of software reuse (2marks)