KENYA METHODIST UNIVERSITY

END OF 1ST TRIMESTER 2010 EXAMINATIONS

FACULTY	**:**	**COMPUTING AND INFORMATICS**
DEPARTMENT	**:**	**COMPUTER INFORMATION SYSTEMS**
UNIT CODE	**:**	**CISY 112**
UNIT TITLE	**:**	**SOFTWARE ENGINEERING PRINCIPLES**
TIME	**:**	**2 HOURS**

Instructions:

- *Answer question 1 and any other 2 questions.*

SECTION A (30 MARKS)

Question 1

i) Define the following terms;
   a) Software requirements
   b) Requirements elicitation (4 mks)

ii) Differentiate between verification and validation. (2 mks)

iii) Briefly describe three types of critical systems. (6 mks)

iv) Describe any two software process models and give two weaknesses of each model. (6 mks)

v) Describe four factors affecting software pricing. (4 mks)

vi) Describe any four user interface design principles. (8 mks)

SECTION B (40 MARKS)

Question 2 (20 marks)

i) 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. (6 mks)

ii) Describe any two software cost estimation methods citing at least one advantage and one disadvantage in each. (6 mks)

iii) Describe any two types of software maintenance activities. (4 mks)

iv) Distinguish between functional and non-functional requirements. (4 mks)

Question 3 (20 marks)

i) Describe the requirements engineering process. (8 mks)

ii) Give any two advantages of object oriented design. (2 mks)

iii) With the help of a flowchart, describe the software inspection process. (6 mks)

iv) Distinguish between white box testing and black box testing. (4 mks)

Question 4 (20 marks)

i) Describe any four issues of professional responsibility that the ACM/IEEE addressed. (8 mks)

ii) Describe any three methods of capturing user requirements. (6 mks)

iii) Describe four attributes of good software. (4 mks)

iv) Distinguish between unit testing and integration testing. (2 mks)