Mount Kenya University

UNIVERSITY EXAMINATION 2012/2013

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF INFORMATION TECHNOLOGY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

VIRTUAL CAMPUS

UNIT CODE: BIT 3101   UNIT TITLE: SOFTWARE ENGINEERING QUESTIONS

DATE: MARCH 2013   MAIN EXAM   TIME: 2HRS

Answer Question One and any other Two Questions.

1. a) What is software Engineering? Explain the characteristics of software.

   (4 Marks)

   b) Explain with the help of a diagram the spiral model.   (8 Marks)

   c) Explain requirements that software's should have.   (8 Marks)

   d) Explain in details Empirical Estimation models.

      i.   The structure of Estimation Models.

      ii.   The cocomo Model.   (10 Marks)

2. a) A company can obtain software either by procuring a COTS or commissioning its own. Discuss the advantages and disadvantages of using either method.

   (10 Marks)

   b) As a software engineers, you have been mandated with the task of carrying out requirements engineering process in the university student registration system.

i. Suggest who might be the stakeholders in the university student registration system. (3 Marks)

ii. Discuss the challenges you are likely to face while carrying out the task. (7 Marks)

3. a) Company A has approached you to design for it the software for running its activities. Explain the steps involved. (10 Marks)

b) Discuss what your understand by the term software validation. (10Marks)

4. a) Discuss human factors to consider during user interface design. (8 Marks)

b) Discuss factors that lead to the rise of costs in maintenance of software. (4 Marks)

c) Discuss why it is important for professional software engineers to be certified in the same way as factors or lawyers. (4 Marks)

d) Explain what it means to have a user friendly interface. (4 Marks)

5. System development life cycles are a series of activities carried out during systems development.

   a) Discuss why it is important to follow its activities. (5 Marks)

   b) Discuss how the activities are carried out and its deliverables at various stages. (10 Marks)

   c) There is no simple way to make an accurate estimate of the effort required to develop a software system. Explain three estimation techniques in software development. (5 Marks)