

Question 1 [30 marks]

- a) Define the following terms
 - i) A System (2 marks)
 - ii) Information System (2 marks)
 - iii) Information Technology (2 marks)
 - iv) System designer (2 marks)
 - v) System builder (2 marks)
 - vi) System Analyst (2 marks)
- b) Briefly discuss the four categories of feasibility tests and what criteria each of them uses to measure feasibility (8 marks)
- c) List five excellent questions to ask when looking for potential actors (5 marks)
- d) Identify any five tasks that you do in the scope definition phase (5 marks)

Question 2 [20 marks]

- a) Briefly discuss any five types of information systems: (10 marks)
- b) In systems development/building we really emphasize the PIECES framework as a useful way to characterize all problems. You are taught how to use PIECES framework to analyze requirements and solutions as well. Briefly discuss this framework (10 marks)

Question 3 [20 marks]

You recently applied for a job with a start up IT Solutions company in Nairobi after completing your BSc in Computer Security and Forensics at JOOUST. You have been asked to lead a team of young software developers in the development and implementation of an E-Learning platform for University XXX. Your responsibility will be a system analyst. You are expected to work with a project team. Using your knowledge of System Development Lifecycle briefly discuss the activities and relevant deliverables in each of the following phases

- i) Planning phase
- ii) Analysis phase
- iii) Design phase
- iv) Implementation phase
- v) Testing phase

(20 marks)

Question 4 [20 marks]

You have received an invitation to a regional conference for Technology and Science at JOOUST in April 2017. You have been asked to do a 15 presentation on system/software development methodologies. Based on your knowledge of IIT 3122 System Building answer the following questions:

- a) Define the term “methodology”. **(2 marks)**
- b) State any two tools that would be required **(4 marks)**
- c) Briefly discuss any seven software/systems development methodologies (include diagrams where necessary for more points) **(14 marks)**

Question 5 [20 marks].

It's a University requirement that all SIIS students deliver an application (R&D) project during their fourth year to fulfill their degree requirements. In phase 1 of the final project you will be expected to deliver a project proposal and thereafter implement your proposal in phase II. The methodology section of your proposal is expected to cover system analysis and design concepts such as analysis and design.

- a) Using diagrams discuss in details three major deliverables in the design phase **(18 marks)**
- b) Identify the tool you will need to successfully execute the deliverables. **(2 marks)**