

**Instructions to candidates**

Duration: **Two (02) hours**

Number of questions: Four (04)

Mark allocation: **100**

Answer all the questions



1.
  - a.
    - i. Define software prototyping (2 mark)
    - ii. Discribe when the software prototyping is needed (3 mark)
  - b. List the processes of risk management in the software development (4 mark)
  - c. Define software process and list its activities (4 mark)
  - d. Define the following
    - i. Open source licensing
    - ii. Reengineering (4 mark)
  - e. Differentiate the verification and validation process of software development (6 mark)
  
2.
  - a. Suggest an appropriate development model for the following scenario and justify your answer  

You are dealing with the Management Information System (MIS) developing department of a very large oil company with multiple departments and having a complex legacy system. Migrating data from this legacy system is complicated. The oil company is concern about its process acceptance criteria and legal contracts

(15 mark)
  - b. Explain the Functional and Non-Functional requirements of Automated teller machine (ATM) system (10 mark)

3.

a. Explain the following agile methods

- i. Extreme programming (5 mark)
- ii. Scrum (5 mark)
- iii. Scrum bun (5 mark)
- iv. Kanban (5 mark)

b. Compare the following models with real time example systems

- i. Incremental model (5 mark)
- ii. Spiral model (5 mark)

4.

a. Compare and contrast the following testing types

- i. Development testing
- ii. Release testing
- iii. User testing (12 mark)

b. Explain roal of a Quality Assurance Engineer (QAE) in software development (10 mark)