



DURATION: ONE HOUR ONLY (1 HOUR)

Date: 16th August 2014

Time: 11.00a.m. - 12.00 noon

Answer **ALL** Questions in **Part I** and **Part II**. Write the answers on the question paper itself.

Part I

Q1.

a. What is *Software Engineering*?

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b. What are the attributes of good software?

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c. What is a *critical system*?

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d. *Dependability is the main concern in critical systems*. Therefore, what are the factors need to be considered to maintain dependability of an e-commerce system?

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e. When developing a computer based critical system you need to consider three (03) dimensions when specifying the overall system reliability. What are they?

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f. Briefly describe the importance of software process standardization.

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g. Identify three (03) milestones in the *requirement engineering process*.

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h. Briefly describe the differences between *functional* and *non-functional* requirements?

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i. What is an *architectural design*?

- j. List down three (03) advantages of designing and documenting the system architecture?

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Part II

Q2.

- I. Fill in the blanks by selecting the most suitable answer given within brackets.
- a. Generic product is a standalone system that are marketed and sold to _____ (Any, Specific) customer.
 - b. The ability of a system to deliver service as specified _____ (Reliability, Survivability)
 - c. The ability of a system to protect itself against accidental or deliberate intrusion _____ (Security , Safety)
 - d. The ability of a system to operate without catastrophic failure _____ (Security , Safety)
 - e. Ability to diagnose the problem, access the component that has failed and make to fix that component _____ (Availability , Repairebility)
- II. Identify whether the following requirements are *Functional* or *Non-Functional*.
- a. Shall be able to enter user detail _____
 - b. Shall be able to get a phone call _____
 - c. User friendly interface _____
 - d. Dependable _____
 - e. Efficient resource usage _____
- III. Identify the most suitable model that can be used for the following situations. Write them in the given space.
- a. To show the boundary of the system _____
 - b. To show how data is process by the system and show how data flows through a sequence of processing steps. _____
 - c. To describe how a system responds to an internal or external event _____

IV. Identify the most suitable process model for the following features. Write them in the given space.

• Adjusting scope during the life cycle may failure the project • No working software is produced until the end of the life cycle • Simple and easy to use	
• Software management is not easy • A working system is available in the early stages of the process • Misunderstanding on software requirements among user and developer are visible	
• Unsatisfied requirements are there • Lead to faster delivery of the system • Reduce the development time and the amount of software to develop	

V. Identify the most suitable perspective related to RUP. Write them in the given space.

- a. A _____ shows the phases of the model over time.
- b. A _____ shows the ordered process activities.
- c. A _____ suggests good practices to be used during the process.

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