**Philadelphia University**

**Faculty of Information Technology**

**Department of Software Engineering**

**Examination Paper**

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**Internal Examiner: Dr. Mourad Maouche**

**Software Requirements (721230) First Exam Time**: **50 Minutes**

**Information for Candidates**

1. *This examination paper contains 4 questions. The total is 20.*
2. *The marks for parts of questions are shown in round brackets.*

***I. Basic Notions***

*Objectives: The aim of the question is to evaluate your knowledge and skills concerning with the basic concepts of* ***Computing Ethics***

**Question 1: [7 Marks]**

**A-** Requirements errors are the most expensive errors to fix later. Discuss this statement. [2 marks]

 ( student can use the numbers given in lectures)

B- What is the relationship between Software Requirements and software Quality? [3 Marks]

 - Quality if fitness for purpose, so the better software requirements; the higher software quality.

C- List two sub-categories for Non-functional requirements. [2 Marks]

 - Quality of service -compliance

### *II. Familiar Problems Solving*

### *Objectives: The aim of the question is to evaluate your basic knowledge of the key aspects of the lectures material and your ability to solve familiar problems.*

**Question 2: [2 Marks, 1 Mark each]**

A Support system is being developed to help a customer service center department doing their job. Classify the following statements into *Goals* and *Software Requirements.*

1. The system should increase efficiency and performance of the employees. goal
2. The system should allow users to search recorded calls based on keywords of their choice. Sw req

**Question 3: [8 marks]**

Consider the following case study, and then answer the following questions:

The Library System is a web-based application that will interoperate with the university system. It allows the librarian to maintain the information about book and users. Only registered users can use the system. The system provides a search option which allows users to search for any item in the library. If the user finds that the required item is available, he/she can checkout the item from the library. If the item is currently not available, the user can make reservation for the item. When the item becomes available the respective user who made the reservation for that item first is notified. The reservation is canceled when the user checks out the item from the library or through an explicit cancellation procedure.

1- Write down three objectives for the library system (3 marks).

 managing books

 managing borrowers

 enhancing security

2- Write down three Functional Requirements of the library system (3 Marks).

- The system shall allow users to search for books based on title, author or publisher.

- The system shall allow users to view a given book's page to display its details.

- The system shall mark a book as "borrowed" when being borrowed by a user.

3- Write down two non-functional requirements of the library system. (2 marks)

 Interoperability

 Security

***III. Unfamiliar Problems Solving***

Objectives: *The aim of the question is to evaluate your knowledge of the key aspects of the lectures material and your ability to solve unfamiliar problems.*

**Question 4: [3 marks]**

Think about one system requirements for the library system then derive one software requirement from it. Write them down clearly.

open answer

Good Luck ☺