


Course No: SWE4414  
Course Title: Object Oriented  
analysis and Design  
Date: 13/11/2013  
No. of Questions: (4)  
Time: 90 Minutes  
Total Grade:

University of Palestine  
  
Midterm Exam  
First Semester 2013/2014

Instructor Name: Najwa Baraka  
College Name: Faculty of Applied  
Engineering and Urban Planning  
Dep. / Specialist: Software  
Engineering Department  
Student No.:  
Student Name:

**Question One:**

**(5 Points)**

▪ **Mark each statement True (T) or False (F), as appropriate:**

1. Financial planning systems with what-if analysis is an example of MIS
2. GDSS is a more general term of CSCWS
3. The only goal for maintenance is removing software errors
4. Both object oriented methodology and structured methodology share the same understanding of the basic structure of software systems
5. Non-functional requirements of the system are addressed in use case view
6. UML is an executable language
7. Object diagrams with messages show collaborations
8. The waterfall model start testing at the beginning of software lifecycle
9. Processed transactions/ second can be used to measure the software reliability
10. Domain requirements that come from the application domain of the system and that reflect characteristics of that domain

**Question Two:**

**(5 Points)**

▪ **Write the appropriate term for the following definitions**

1. A graphical presentation of a collection of model elements
2. Used to create a UML model for existing code
3. Used to express the objects communication in UML
4. The modern inheritor of the evolutionary style of process model
5. The process of establishing the services that the customer requires from a system the constraints under which it operates and is developed

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**Question Three: (14 Points)**

- **Fill the Following Comparison Table:**

Analysis phase in SDLC	Design phase in SDLC
Aggregation	Composition
Generalization	Association
Analysis models	Design models
Incremental models	Iterative models

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Functional requirements	Non-functional requirements
Traditional localization	Object oriented localization

**Question Four:** **(36 Points)**

- *List and explain the basic principles of object orientation, what the impact of each principle in software development*

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- *List the nine UML diagrams with their link to 4+1 view Model*

- *List and compare between the different localization schemes?*

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• **Based on your understanding of waterfall and evolutionary models, *Talk in details about:***

**1. Waterfall challenges and problems**

**2. The possibility of evolutionary models in replacing waterfall model**

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- **Draw a class diagram and an objet diagram (use your own values) summarizing the following facts about a library, add any information as needed**

For each book held by the library, the book contains the title, author's name and ISBN number. There may be multiple copies of a book in the library.

There are many registered borrowers belonging to the library, each of whom is issued with a number of tickets.

A librarian can create/modify/delete Book information. A book can be loan by two kinds of borrowers: students, who have to identify themselves with their student number, and lectures. The system records the name and address of each reader and the number of tickets that they have been issued with. Readers can borrow one book for each ticket and the system keeps a record of which books a reader has borrowed, along with the date by which the book must be returned.

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Best of Luck

"النجاح فى الحياة لا يأتى مصادفة... ولكنه نتيجة تخطيط وجهد، فإن اردت ان تتنبأ بمستقبلك فقم بينائه الآن... وكل نجاح عظيم بدأت شرارته الأولى بقرار" د.ابراهيم الفقي