

Course No: **ESGD4117**  
 Course Title: **Object Oriented Analysis and Design**  
 Date: **10 / 11 / 2010**  
 No. of Questions: **3**  
 Time: **1 hr**  
 Using Calculator (**No**)

University of Palestine  
  
 Mid-Term Exam  
**First term 2010/2011**  
 Total Grade: **20**

Instructor: **Eng. Tasneem Darwish**  
 Student No.: \_\_\_\_\_  
 Student Name: \_\_\_\_\_  
 College Name: **Eng. College**  
 Dep. / Specialist: **Software Engineering**  
 Using Dictionary (**No**)

**First Question (10/20)**

**Q1: choose the right answer and write your answers in the table below (choose only one option):**

Question number	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	1.10	Total mark
Answer number										

**1.1)** Which of the following terms best describes an object that is made up of other objects?  
 (a) Generalization.  
 (b) Inheritance.  
 (c) Association.  
 (d) Aggregation.  
 (e) Specialization.

**1.2)** What is ‘encapsulation’?  
 (a) Depicting objects using doughnut diagrams.  
 (b) Ensuring that the data inside an object can only be accessed via operations.  
 (c) Sealing the state of an object so that it cannot be changed.  
 (d) Putting objects into a collection.

**1.3)** In UML diagrams, how are abstract classes distinguished from concrete classes?  
 (a) Concrete classes are shown as boxes with dashed outlines.  
 (b) Labels on abstract classes are shown in italics.  
 (c) Labels on concrete classes are shown in italics.  
 (d) Abstract classes are shown as boxes with dashed outlines.

**1.4)** What is an ‘abstract’ class?  
 (a) An object.  
 (b) A class with no methods.  
 (c) A class with no concrete subclasses.  
 (d) A class with at least one undefined message.  
 (e) An interface.

**1.5)** What does the term ‘polymorphism’ refer to?  
 (a) The ability of a variable to point at different classes of object at different times.  
 (b) All object-oriented programming languages are different.  
 (c) All object-oriented methodologies use a different notation.

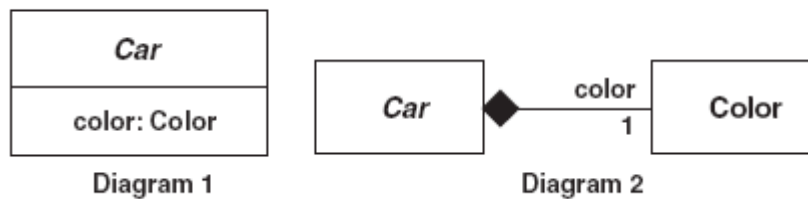
**1.6)** Which of the following UML artifacts are used to show the distribution of processes and resources in a system?  
 (a) Interaction diagrams.  
 (b) Sequence diagrams.  
 (c) Deployment diagrams.  
 (d) Communication diagrams.  
 (e) State machine diagrams.  
 (f) Class diagrams.  
 (g) Glossaries.

**1.7)** In a UML diagram, how are objects distinguished from classes?  
 (a) Object labels are shown in italics.  
 (b) Class labels have a box drawn around them.  
 (c) Object labels are underlined.

**1.8)** Which of the following terms best describes the case where a Stack class is implemented using an internal instance of List?  
 (a) Association.  
 (b) Specialization.  
 (c) Genericity.  
 (d) Composition.  
 (e) Singularity.

1.9) In the figure below, what do Diagrams 1 and 2 illustrate?

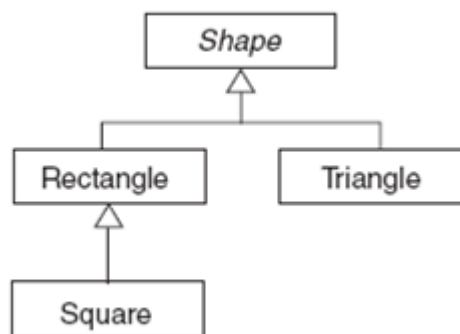
- (a) 1: An aggregation, 2: A composition.
- (b) 1: An attribute, 2: An aggregation.
- (c) 1: An aggregation, 2: An attribute.
- (d) 1: An attribute, 2: A composition.
- (e) 1: A composition, 2: An attribute.



1.10) With reference to the figure below, which of the following assignments would be allowed by a compiler?

- (a) `sq = sh;`
- (b) `sh = tr;`
- (c) `tr = sq;`
- (d) `tr = sh;`

Shape sh;  
Triangle tr = new Triangle();  
Square sq = new Square();



## Second Question

(10/20)

**Q2 A: What is the difference between the iterative and the spiral methodologies?**

Course No: **ESGD4117**  
Course Title: **Object Oriented  
Analysis and Design**  
Date: **10 / 11 / 2010**  
No. of Questions: **3**  
Time: **1 hr**  
Using Calculator (**No**)

University of Palestine



Mid-Term Exam  
**First term 2010/2011**  
Total Grade: **20**

Instructor: **Eng. Tasneem Darwish**  
Student No.: \_\_\_\_\_  
Student Name: \_\_\_\_\_  
College Name: **Eng. College**  
Dep. / Specialist: **Software Engineering**  
Using Dictionary (**No**)

---

---

**Q2 B: what is the difference between the static modeling and the dynamic modeling?**

**Q2 C: list three of the disadvantages of multiple inheritance:**

- 1)
- 2)
- 3)

**Q2 D: what is the difference between association and aggregation?**

---

---

*Good Luck*

---

---