KABARAK   **UNIVERSITY**

EXAMINATIONS

2008/2009 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE

COURSE CODE: **COMP 320**

COURSE TITLE: **OBJECT ORIENTED ANALYSIS AND DESIGN**

STREAM: **Y3S2**

DAY: **TUESDAY**

TIME: **2.00 – 4.00 P.M.**

DATE: **24/03/2009**

INSTRUCTIONS:

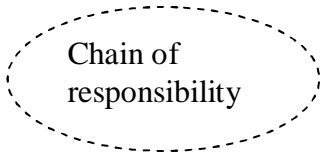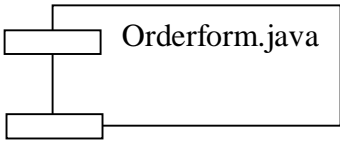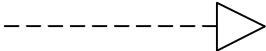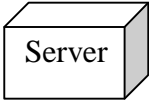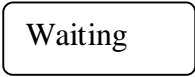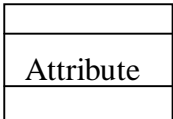Answer question one and any other two questions

PLEASE TURN OVER

Question one (30mks)

a) Name the other description of an object a part from behavior and state [1mk]

b) The table below shows the building blocks of the Unified Modeling Language (UML). Study the diagrams carefully and name each of them. [5mks]

Building blocks of UML	
Diagram	Name
Chain of responsibility (dashed ellipse)	Colaborations
(i) Orderform.java	……………………………………………..
(ii) (dashed arrow with open triangle head)	……………………………………………
(iii) Server (3D box)	……………………………………………..
(iv) Waiting (rounded rectangle)	…………………………………………….
(v) Attribute (rectangle with divisions)	……………………………………………..

c) The language for visualization, specification, constructing, and documentation is known as what? [1mk]
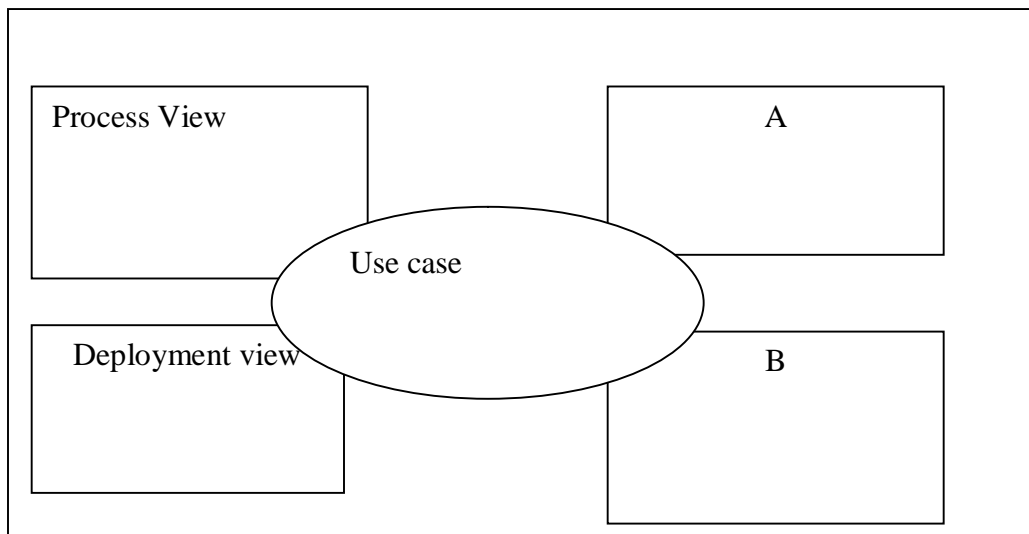
d) High quality system is one which meets its user needs. It must be able to run on available hardware and software. Which quality is described here? [1mk]

e) Highlight two reasons why reuse is hard [2mks]

f) Using a diagram differentiate between an Actor and Use Case [2mks]

g) The system architecture is an intensive system that can best be described by five interlocking views. Briefly illustrate these views [4mks]

h) With the help of a well labeled diagram describe what you understand by a **class** as used in object oriented analysis and design [2mks]

i) Explain the four layers of object oriented design [6mks]

j) What basic principles are used to guide one in the design of modular architecture [6mks]
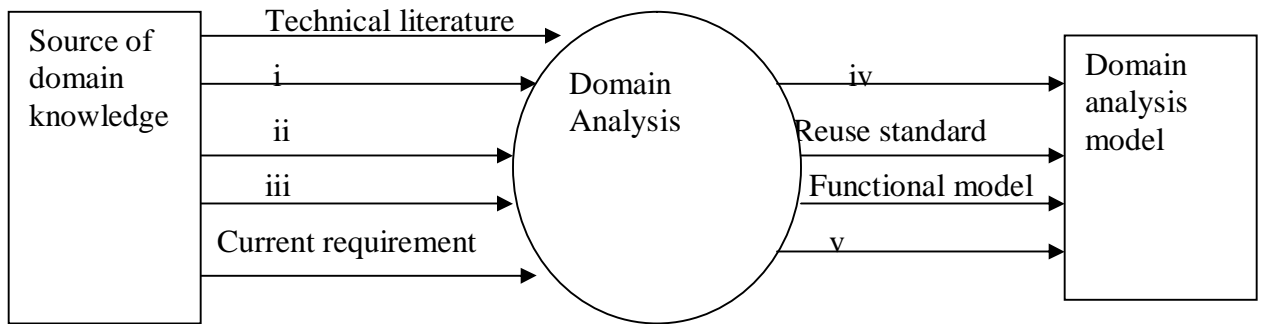

Question Two (20mks)

a) Highlight two criteria that can be used to compare **conventional** and **object oriented** methods [2mks]

b) Sadimu is new system analyst and on her first assignment she is required to identify objects from the given scenario. But she is not aware on how to go about this. How will you help Sadimu so that she can pick out the objects as she studies the problem to be solved? [3mks]

c) Explain the elements of activity diagrams [5mks]

d) State the steps of modeling the architecture of the system [3mks]

e) Name the qualities of a good system [4mks]

f) The diagram below shows the views of system's Architecture Model. Study it and answer the questions that follow.

i. Identify the views [2mks]

       A……………………..

       B………………………

ii. Which of the views above addresses system topology and delivery [1mk]

Question Three (20mks)

a) The figure below is an input and output for domain analysis model. Identify the input label i-iii and output iv and v. [5mks]

b) What are the effective approaches for reviewing a CRC model [5mks]

c) With the help of a diagram show how object oriented analysis model can be transformed to object oriented design [10mks]

Question Four (20mks)

a) Briefly explain the two strategies for integrated testing [4mks]

b) Identify the characteristics of a bug that makes it difficult in debugging [4mks]

c) Explain the following terms in relation to object oriented testing

    i. System testing [3mks]

    ii. Recovery testing [3mks]

    iii. Stress testing [3mks]

    iv. Performance testing [3mks]

Question Five (20mks)

With the help of a diagram describe the following UML diagrams

    a. Activity diagram   [5mks]

    b. Class diagram   [5mks]

    c. Sequence diagram   [5mks]

d. Collaborative diagram   [5mks