**COMP 2831 Week Five Exercise A01029917 Andrew Hewitson**

**1. What is object-oriented analysis, and what are some advantages of this method?**

A way to view and model system requirements. It’s the act of viewing and understanding a system from the viewpoint of the objects themselves as they function and interact. OOA is popular because it integrates easily with object-oriented programming languages. It’s modular and reusable which reduces time and cost. It is also easy to maintain or expand because objects can be created using inheritance.

**2. Define an object and provide three examples.**

An object is a real person, place, thing or event in object-oriented analysis. Three examples of objects might be a Student, an Instructor, and a TextBook.

**4. Define a method and provide three examples.**

A specific task which an object must perform. Describes what and how an object does something.

They are functions and behaviours that belong to a class and are represented with verbs. Three methods in a BankAccount class might be openAccount(), depositMoneyInAccount() and closeAccount().

**8. Define an actor and provide three examples.**

An external entity with a specific role which initiates a use case by asking a system to perform a function or a process. In a use case system actors are used to model interaction with the system. Three examples of Actors in a restaurant system might be a Chef, a Customer and a Waiter.

**Explain the Difference between an Activity Diagram and a Systems Sequence Diagram**

**Sequence Diagram** –A dynamic model of a use case, showing the communication between objects and the timing of the interaction between classes/objects over a period of system execution. It graphically documents the use case by showing the classes, the messages, and the time of the messages. Includes symbols that represent classes, lifelines, message and focuses.

**Activity Diagram** – Shows the flow of use cases / actions and events as they flow from one activity to another. Shows the order in which the actions take place and identifies the outcomes. Graphically depicts the flow of a process, the steps of a use case, or the logic of an object behaviour (method).

The primary difference is that an activity diagram focuses on the actions while a sequence diagram focuses on the communication.