CS 3009: Software Engineering (A)

Quiz 5

Time: 15 minutes   Max Marks: 20   Roll No. _____Solution____

Q1.   **10 Marks**
Mark each statement as True or False. **Circle** the letter T if the statement is true, circle the letter F if the statement is false. Unclear answers will not be given any credit.
1. Architecture of every software system is developed using exactly one architecture style. T / **F**
2. A reference model is just another name of functional decomposition. T / **F**
3. Swimlane diagram is more suitable when we have single participant in a scenario as compared to the scenario where more than one participants are involved. T/ **F**
4. CRC cards can be used as an input to the process of developing a class diagram. **T**/F
5. CRC in CRC cards during engineering of software is an abbreviation for Cyclic Redundancy Check. T/**F**
6. Prototyping can be used as a requirements elaboration tool. **T** / F
7. The maximum number of rules in a binary decision table are n^2. T / **F**
8. <<include>> in a use case diagram is used to model a use case which is shared by two or more use cases. **T** / F
9. An ER diagram should be used to model requirements related to the problem domain entities that are required to be stored in a permanent storage (or database). **T** / F
10. A use case diagram is a flow oriented model and models the flow of user actions. T / **F**

Q2.   **10 Marks**

We need to develop a game scenario where there can be multiple buildings and roads on a map. There can be different vehicles (like rickshaw, car, van, truck etc.) running on the roads having different colours, number of doors, and number of wheels. Each of the vehicles can start, stop, and run in its own way. Each road has a different type (smooth, bumpy), width, and age (old, new). The stop and run of vehicles is affected by the road they are running on. There are different buildings on the map and the buildings have different colours, height, width, and type (glass, wooden, concrete). The map knows which buildings are situated along which roads and vice versa.

To do: Develop **CRC cards** for this game scenario. Do not develop a card for the game engine.

Vehicle

- Knows its color
- Knows its # of doors
- Knows its # of wheels
- can start
- can stop
- can run

Road

Road

- knows its type
- knows its width
- knows its age

Building

- Knows its colour
- knows its height
- knows its width
- knows its type

Map

- knows location of buildings
- knows about Roads
- contains roads
- contains buildings

Road
Building