**TAKORADI TECHNICAL UNIVERSITY**

**FACULTY OF APPLIED SCIENCE**

**DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)**

**End of Second Semester Examination - 2017/2018 Academic year**

**HND Information and Communication Technology (HND ICT Level 200)**

**Year: Two (2) REGULAR**

**Course Code: ICT 211: Introduction to Software Engineering Duration 2 Hours**

**SECTION A**

Answer **ALL** questions from this Section

**ALL questions CARRY EQUAL Marks**

*Takoradi Technical University (TTU) is currently running through different departments like Administration, Finance, Examination, Admission, Library, Computer Labs, Facility management and Student management System etc. Every department has its own specific processes and each department is using computer-based system to some extent but not complete computer based solutions.*

*There is also inter-departmental communication for the smooth running of all functions in respective departments. It is decided by the* ***Higher Management that all the departments should be integrated under one system and that system should accommodate all the processes existing in all departments.***

***It is also decided that if this system is implemented successfully then it will also be used in other departments of the TTU independently after configuring it according to their need.***

*Higher management wants to see this system within the year, Risks, which can arise, should be accommodated implicitly keeping the time factor in mind.*

*As the system will be will used in Public Sector, so verification and validation factors must be administered accordingly.*

***Question 1***

1. *What software process model (s) would you choose and why ?-* ***Provide******Any 13 POINTS [13 marks]***
2. *Explain in detail system need, modification and integration.* ***[7 marks]***

**SECTION B- PRACTICAL I**

Answer **ALL** questions from this Section

The following are the requirements engineering reports from Railway Company Ltd.

**Requirements/Problem Statements**

* Information about the Route, Cancellation of tickets, departure time, arrival time, number of trains available, and other such information
* Store and retrieval of information about the various transactions related to Rail travel
* Keep track of all its passengers and thus schedule their journey accordingly
* Maintains records of passengers travelling in the different trains on different dates reaching different destinations in the system
* User friendly interface to administration and customers

**Question 1**

You are required to Design a RAILWAY SYSTEM of your group individual Components of using Entity Relationship diagram (ERD) and Data flow diagram (DFD) **[15 marks]**

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**End of Second Semester Examination - 2017/2018 Academic year**

**HND Information and Communication Technology (HND ICT Level 200)**

**Year: Two (2) REGULAR –PRACTICAL II**

**Course Code: ICT 211: Introduction to Software Engineering Duration 1 Hours**

**SECTION C-PRACTICAL II**

The following are the requirements engineering reports from Railway Company Ltd.

**Requirements/Problem Statements**

* Information about the Route, Cancellation of tickets, departure time, arrival time, number of trains available, and other such information
* Store and retrieval of information about the various transactions related to Rail travel
* Keep track of all its passengers and thus schedule their journey accordingly
* Maintains records of passengers travelling in the different trains on different dates reaching different destinations in the system
* User friendly interface to administration and customers

**Question 1**

1. You are required to Design a RAILWAY SYSTEM of your group individual Components of using Entity Relationship diagram (ERD) and Data flow diagram (DFD) **[10 marks]**
2. You are required to design interface (s) for your individual group components

**[10 marks]**

1. Prepare a PowerPoint presentation of your individual group Design Components using Entity Relationship diagram (ERD) and Data flow diagram (DFD) OR Any design Diagram(s) of your choice – To present to a panel of invigilators **[15 marks]**