**M.G.M’s COLLEGE OF ENGINEERING, NANDED**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

Date: 28/7/2016

**Assignment: I**

**Class: BE (CSE) - I & II Subject: Software Engineering**

1. Explain Software Engineering as a layered technology.
2. Define and explain Generic Process Model of Software Engineering.
3. Enlist & explain different Software Myths.
4. Explain software as a Process Framework.
5. .Explain Waterfall Model and Spiral Model in detail
6. Define and explain the Agile Process. Explain how the principles underlying agile methods lead to the accelerated development and deployment of software.
7. When would you recommend *against* the use of an agile method for developing a software system?
8. Explain the concept of Extreme Programming (XP).Extreme programming expresses user requirements as stories, with each story written on a card. Discuss the advantages and disadvantages of this approach to requirements description.
9. What are the functional and non functional requirements? With reference to Case study list these requirements
10. Explain various requirement elicitation techniques.
11. What is Requirement engineering? Explain the steps in it.
12. Explain the requirement modeling approaches.
13. What is scenario based modeling? Draw complete use case diagram for case study
14. What is Class based modeling? Explain the steps in it.
15. Extract the entity classes from the given case study using noun extractions. Draw the class diagram.
16. Draw and explain Flow Oriented Modeling. Draw the Data flow diagram (DFD) for a case study.

**Case Study:**

To help monitor climate change and to improve the accuracy of weather forecasts in remote areas, the government of a country with large areas of wilderness decides to deploy several hundred weather stations in remote areas. These weather stations collect data from a set of instruments that measure temperature and pressure, sunshine, rainfall, wind speed, and wind direction. Wilderness weather stations are part of a larger system which is a weather information system that collects data from weather stations and makes it available to other systems for processing. The systems consist of;

 ***The weather station system:***This is responsible for collecting weather data, carrying out some initial data processing, and transmitting it to the data management system.

***The data management and archiving system****: This* system collects the data from all of the wilderness weather stations, carries out data processing and analysis, and archives the data in a form that can be retrieved by other systems, such as weather forecasting systems.

***The station maintenance system:***This system can communicate by satellite with all wilderness weather stations to monitor the health of these systems and provide reports of problems. It can update the embedded software in these systems. In the event of system problems, this system can also be used to remotely control a wilderness weather system.

**Faculty In charge**

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Note: Last Date for submission of assignment is 8-08-2016