

# MIT 850 Theory assignment 1

**Hand-out date:** 25 July 2016

**Due date:** 8 August 2016

**Marks:** 40

Your submission should be a pdf file which does not exceed 5 pages including the assignment cover page. You are allowed to have a 6<sup>th</sup> page for references.

---

## Question 1

**[15 marks]**

a. Refer to the Charette (2005) paper. Briefly discuss any **four lessons** you have learned from this paper. Your discussion should not exceed one typed page (A-4 size).

b. Charette (2005) reported three case studies labelled Case Study #1 (abandoned in 1997), Case Study #2 (abandoned in 2002), and Case Study #3 (abandoned in 1993). Select any one of these case studies and do the following:

- i. Explain whether, in your opinion, the Waterfall process was suitable processes for the software project.
- ii. Explain why, in your opinion, the use of Waterfall did not result in a successful software project.
- iii. Explain whether, in your opinion, the Spiral process as described by Boehm (1988) would have led to a successful outcome.

## Question 2

**[15 marks]**

Pressman (2005) identified various generic activities that are applicable to all software projects, and various umbrella activities for the entire software process. Refer to the LAS case study and do the following:

- a. Identify one problem in each of the generic process framework activities of *communication, planning, modeling, construction, deployment*.
- b. Identify one problem in the umbrella activities of *tracking and control, quality assurance, technical reviews*.

For each problem that you identify, provide a brief explanation as to why you consider this to be a problem.

## Question 3

**[10 marks]**

a. In the 'No Silver Bullet' paper, Brooks (1987) identified two major types of difficulties in software technology as the difficulties due to (1) essence (2) accidents

- i. provide a concise definition of the meaning of the terms 'essence' and 'accidents'.
- ii. provide a brief description of the difficulties that are due to 'essence'.
- iii. provide a brief description of the difficulties that are due to 'accidents'.

b. In the 'No Silver Bullet' paper, Brooks (1987) also identified promising silver bullets for the 'accidents' that were available in 1987.

- i. provide a brief description of these 'silver bullets'.
- ii. In your opinion, what promising silver bullets for 'accidents' are available in 2016?

### Additional references (available on ClickUP):

Pressman, R.S. (2005) Software engineering, in R.H. Thayer & M.J. Christensen (eds), *Software Engineering Volume 1, The Development Process*, 3<sup>rd</sup> edition.