

M.S. IN SOFTWARE TECHNOLOGIES (MSST)

00234

Term-End Examination

December, 2014

**MINI-074 : SOFTWARE ENGINEERING AND PROJECT
MANAGEMENT**

Time : 3 hours

Maximum Marks : 100

Note :

- (i) Section I is **compulsory** and carries 30 marks.
- (ii) Section II : Answer any **five** questions. It carries 70 marks.
- (iii) Assume suitable data wherever required.
- (iv) Draw suitable sketches wherever required.
- (v) *Italicized figures to the right indicate maximum marks.*

SECTION I

1. Describe how release planning is done in a Scrum project. What information is mandatory for the Product Owner to have ? Outline the difference in the approach of high-level planning with that of the traditional project planning. Also explain how poker planning (story point estimation) avoids the drawback of traditional estimation. What is the main limitation of story point estimation from a productivity perspective ? 10+3+7+8+2

SECTION II

2. Why is high level planning essential ? In what way is high level planning influenced by detailed planning ? Given that an organisation has done some similar projects, but in the project at hand there are many uncertain activities. Also most stakeholders disagree on the effort estimation for many of such activities. What would you suggest as a basis for planning and why ? 4+4+6
3. Briefly describe the steps in traditional System Development Life Cycle (SDLC). What are the primary problems with this model ? Write any five differences between SDLC and Prototype model. 7+2+5
4. (a) Compare ISO with CMMI in its approach to quality. 7
(b) Write the detailed steps in CMM approach. 7
5. What is the difference between white-box and black-box testing ? Explain Cyclomatic complexity approach for white-box testing with suitable example. 5+9
6. (a) What is Agile development ? Why has agile development become popular over traditional development approaches ? Write any four reasons. 3+4
(b) Given that a small project group (about 9 people) has so far been successful in their estimations using FPs. Would it be advisable for them to change to Story Points estimation if they start using Scrum ? What are the possible outcome differences ? 3+4

7. Given below is the list of activities and their dependencies. Given that the project starts on 1st of March. Draw the network diagram and calculate the earliest date on which the project can be completed. Also identify the critical path.

4+4+6

Activity ID	Duration in days	Dependency
1	3	None
2	4	None
3	4	1
4	3	1
5	2	2
6	7	2
7	2	3
8	2	4
9	10	5, 6
10	4	7
11	3	8
12	8	9
13	4	10, 11
14	8	12, 13