Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐　　Total No. of Pages : 02

Total No. of Questions : 09

M.Sc.(IT) (2015 Onwards)　(Sem.–3)
SOFTWARE ENGINEERING AND PROJECT MANAGEMENT
Subject Code : MSIT-302
Paper ID : [74067]

Time : 3 Hrs.　　　　　　　　　　　　　　　　　Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**
3. **Use of non-programmable scientific calculator is allowed.**

SECTION-A

Q1. What is the relationship between a process model, process specification, and process for a software project? Provide three examples of software projects that would be amenable to :

   a. Waterfall model

   b. Agile Methodology

Q2. a. What effect does the project monitoring activity have on the development process?

   b. Which of the development process models would you employ for the following projects? Justify.

   i. A web-based system for a new business where requirements are changing fast and where an in-house development team is available for all aspects of the project.

   ii. A Web-site for an on-line store which has a long list of desired features it wants to add, and it wants a new release with new features to be done very frequently.

SECTION-B

Q3. a. Briefly describe each of the four elements of the design model.

   b. What is the role of modeling in developing an SRS?

Q4. Develop a complete use case for the following activities :

   a. Making a withdrawal at an ATM.

   b. Using your charge card for a meal at a restaurant.

SECTION-C

Q5. What is the role of effort estimation in a project? Explain the top down approaches for effort estimation.

Q6. a. What are the different levels of testing and the goals of the different levels?

b. Explain how Boundary Value Analysis is used to select the test cases. Give example.

SECTION-D

Q7. What are possible causes of changes in software? What are the steps of Software configuration management?

Q8. Write short notes on :

a. ISO 9126

b. Web engineering

SECTION-E

Q9. Answer briefly :

a. What are the main differences between a student software and industrial-strength software?

b. Differentiate between validation and verification.

c. Define fault, error, and failure.

d. Describe agility.

e. What are the main error types for requirements?

f. Write a short note on *'critical path method'*.

g. Explain FP based estimation with example.

h. What is the purpose of RMMM plan?

i. Define *'version control'*.

j. List the coupling metrics.