Printed Pages: 02 **Sub Code: EIT402**

Paper Id: 113207 **Roll No.** | | | | | | | | | | |

B TECH
(SEM IV) THEORY EXAMINATION 2018-19
SOFTWARE ENGINEERING

Time: 3 Hours *Total Marks: 100*

Note: 1. Attempt all Sections. If required any missing data, then choose suitably.

SECTION A

1. Attempt all questions in brief. **2 x 10 = 20**

a. Define software crisis.
b. List any two essential qualities of a software.
c. Define water fall model.
d. Explain spiral model.
e. What is SDLC?
f. Explain software requirement specifications.
g. Define DFD.
h. Discuss software architecture design.
i. What is COCOMO?
j. Explain structural testing.

SECTION B

2. Attempt any *three* of the following: **10x3=30**

a. Discuss the main aims of Software Engineering? Discuss the characteristics of a software with examples.
b. Write a short note on SEI-CMM based quality assessment.
c. What is meant by the size of a software project? Why does it need to estimate the size of the project?
d. What are alpha, beta and acceptance testing? Discus the differences among these different types of testing.
e. What do you understand by the term CASE tool? Discuss the benefits of computer aided software engineering.

SECTION C

3. Attempt any *one* part of the following:

a. What is meant by prototyping? Discuss the prototyping model in detail.
b. Discuss various activities during software development life cycle.

4. Attempt any *one* part of the following:

a. Define the term software requirements specification. Discuss the issues in writing a software requirement specification.
b. What are the different levels of DFD? Discuss.

5. Attempt any *one* part of the following:

a. With suitable examples explain why is it necessary to design system architecture before writing the specifications.

b. Calculate Halestead's basic measure on factorial code given below:

```
int fact (int n)
    {if (n= =0)
        return 1;
     else
        return n*fact(n-1)
    }
```

6. Attempt any *one* part of the following:

a. What is software testing? Explain in detail following black box testing:
   (i) Equivalence partitioning
   (ii) Boundary value analysis.

b. Write a brief note on constructive cost models.

7. Attempt any *one* part of the following:

a. Explain the importance of software configuration management.

b. Discuss the following:
   i. Reverse engineering
   ii. Software risk analysis