Printed Pages : 1 **Roll No.** | | | | | | | | | | | **EIT402**

B.TECH.

THEORY EXAMINATION (SEM–IV) 2016-17

SOFTWARE ENGINEERING

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Explain the following: **10 x 2 = 20**

(a) Define the term "Program" and "Software".

(b) List the advantages of Waterfall model.

(c) What do you mean by Feasibility Study?

(d) What is ER Diagram?

(e) List the properties of modular system.

(f) What is the data design at architectural level?

(g) What is Structural Testing?

(h) What is software reverse engineering?

(i) What is Encapsulation?

(j) Explain functional requirements.

SECTION – B

2. Attempt any five of the following questions: **5 x 10 = 50**

(a) Discuss the prototype model. What is the effect of designing a prototype on the overall cost of the Software Project?

(b) What is Software maintenance? Discuss different types of maintenance of that a software product might need.

(c) Define software testing. Explain various level of testing.

(d) What do you mean by software risk? Discuss the risk management activities during software development.

(e) Explain Cohesion and Coupling with different types.

(f) What is difference between verification and validation? Explain with example.

(g) Discuss Cyclomatic complexity measures of software measurement and matrices with example.

(h) What do you mean by good software design? Discuss the criteria for a software design to enhance the quality of software.

SECTION – C

Attempt any two of the following questions: **2 x 15 = 30**

3. (a) Explain 1 Level DFD of Library management system.

(b) For the following C program estimate the Halestead's length and volume –

```
/* program to calculate GCD of two numbers*/
int Compute(x,y)
      {
while (x!=y)
if( x>y) then
                  x=x-y;
else
        y=y-x;
return x;
        }
```

4. Using a schematic diagram and suitable example show the order in which the following are estimated in the COCOMO estimation technique: cost, effort, duration, size.

5. (a) What is SRS? Discuss the standard template of SRS.

(b) Discuss Spiral model with advantages and disadvantages.