Printed Pages: 02 Sub Code: RCS402

Paper Id: 110432 Roll No. [redacted]

B TECH
(SEM VI) THEORY EXAMINATION 2017-18
SOFTWARE ENGNEERING

Time: 3 Hours *Total Marks: 70*

SECTION A

1. Attempt *all* questions in brief. **2 x7 =14**

a) Write methods of requirements elicitation.
b) Write the differences between Verification and validation.
c) What is the software crisis?
d) Compare ISO9000 and SEI-CMM.
e) Write differences between Top-down and bottom-up approach.
f) Write differences between software Re-engineering and reverse engineering.
g) Explain Black box testing.

SECTION B

2. Attempt *any three* of the following. **7 x3 = 21**

a) Explain briefly the concept of modularity in term of software design with suitable example.
b) Explain the term SDLC. Discuss various activities during SDLC.
c) Define the following term: Object, Massage, Polymorphism, Abstraction, Class.
d) Explain the term function oriented and object-oriented design.
e) Write short notes on the following.
    1. White box testing
    2. COCOMO model
    3. E-R Diagram

SECTION C

3. Attempt *any One* of the following: **7x1 = 7**

a) Develop the Level one DFD of library management system.
b) What do you understand by token count? Explain Halstead software metrics in detail.

4. Attempt *any One* of the following: **7 x1 =7**

a) Write short notes on the following
    1. Software testing
    2. Software quality assurance
    3. Cyclomatic complexity measures
b) What is Risk management? How are project risk different from technical risk?

5. Attempt *any One* of the following: **7x1 = 7**

a. What is data flow diagram? Explain rule for drawing good data flow diagram with the help of suitable example.

b. What do you understand by coupling and cohesion? What role they play in software design? Describe the properties of best coupling and Cohesion with example.

6. **Attempt *any One* of the following:** **7x1 = 7**

a. What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways for reducing the risk.

b. Define the following 1) Software maintenance 2) Structure of case tool.

7. **Attempt *any One* of the following.** **7x1 =7**

a. What do you mean by functional independence? Why functional independence is the key factor for a good software design? Explain.

b. Discuss the following.

1. Walkthroughs
2. Inspection of software review techniques