(Please write your Roll No. Immediately) Roll No:-

First Term Examination, September 2017

B. Tech [7th Semester]

Paper Code: -- ETCS 303 **Subject: Software Engineering**

Time:--1.5 hours Max Marks: -- 30

Note: -- Attempt Q.No.1 which is compulsory and any two more questions from the remaining. Each question carries 10 marks.

Q1 a) Why it is difficult to improve a software process? (2)

b) What are the characteristics of good SRS? (2)

c) What is the need of feasibility study? (2)

d) What are data structure matrices? (2)

e) What is software prototyping? (2)

Q2 a) Explain generic Waterfall Model for Software Development. (5)

b) Compare Iterative Enhancement model with Evolutionary Process Model? (5)

Q3 a) Why CMM is used? Explain in detail the process maturity levels in SEI's CMM? (5)

b) Consider the problem of Banking Management System, design Use Case Diagram, Level –I DFD and ER Diagram. (5)

Q 4 a) Explain Putnam resource allocation model? Describe the trade-off between time verses cost in Putnam resource allocation model? (5)

b) Write a program to find the largest number among three. Also, find the Cyclomatic Complexity of the program using three different methods. (5)

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First-Term Examination (September-2016)

B.Tech.-5th Semester (CSE/IT branch)

Paper Code: ETCS-303 *Subject: Software Engineering*

Time: 1:30 Hr. **Max. Marks: 30**

Note: Q.1 is compulsory and Attempt any two more Questions.

1. (a) Write the name of the phase of software life cycle for which IEEE recommended standard IEEE 830-1993 is used. (2)
   (b) Define Stakeholders. (2)
   (c) Which mode in Intermediate COCOMO represents complex products? (2)
   (d) Write the full form of FAST and QFD techniques. (2)
   (e) Explain the bath tub curve of hardware reliability. (2)

2. (a) Discuss the prototyping model. What is the effect of designing a prototype on the overall cost of the project? (5)
   (b) For a program with number of unique operators and number of $\eta 1 = 30$ and number of unique operands $\eta 2 = 50$, Compute the following:
   (i) Program volume (ii) Effort and time
   (iii) Program length (iv) Program level (5)

3. (a) Draw level 0 and level 1 DFD for Hospital Management System. (4)
   (b) Explain the Walston & Felix model. (2)
   (c) Discuss basic COCOMO model by discussing organic, semi detached and embedded mode. (4)

4. (a) What are information flow metrics? Explain the basic information flow model. (4)
   (b) Differentiate between functional and non-functional requirements. (3)
   (c) What is risk exposure? What techniques can be used to control each risk? (3)