Course Code : CST 315 **GTHS/RS – 19 / 7186**

Fifth Semester B. E. (Computer Science and Engineering) Examination

SOFTWARE ENGINEERING

Time : 3 Hours] [Max. Marks : 60

Instructions to Candidates :—

(1) All questions carry marks as indicated.
(2) Assume suitable data wherever necessary.
(3) Illustrate your answers wherever necessary with the help of neat sketches.
(4) Mobile phones are prohibited in examination hall.

1. Attempt any **Two** :—

(a) Elaborate the major work products produced for construction and transition phase in unified process with example. 5 (CO 1)

(b) Address human factors focused by agile development models. 5 (CO 1)

(c) Why process is essential in software engineering ? Describe a software process framework with neat diagram. 5 (CO 1)

2. Attempt any **Two** :—

(a) Elaborate the major deliverables for inception and elaboration phase in unified process with example. 5 (CO 1)

(b) How do you deal when requirements changes frequently ? Identify and explain the model for this purpose. 5 (CO 1)

(c) Enlist and explain testing principles. 5 (CO 1)

3. Attempt **EITHER** :—

(a) Elaborate on the scope of design engineering. Explain with schematic how the analysis model is translated into the design model. Elaborate on the eight evaluation criterions for good design. 10 (CO 2)

(b) Consider an answering system for answering phone calls and recording messages from caller. It is intended as a personal answering system for a single owner. Draw any two behavioral and class diagrams for the above discussed scenario. 10 (CO 2)

4. Attempt any **Two** :—

(a) How will you derive test–cases by using the equivalence partitioning method ? Justify with examples. 5 (CO 3)

(b) "Debugging is a consequence of a successful testing". Comment. Describe the process elaborating on common debugging tactics. 5 (CO 3)

(c) Enlist different approaches to system testing. Elaborate any two of them with example. 5 (CO 3)

5. Attempt any **Two** :—

(a) Describe the difference between known risk and predictable risk along with classification and appropriate examples. 5 (CO 4)

(b) Discuss the function point metric proposed by Albrecht. A system has 12 external inputs, 24 external outputs fields, 30 different external queries, manages 4 internal logical files, and interfaces with 6 different legacy systems (EIFs). All of these data are of average complexity, and the overall system is relatively simple. Compute FP for the system. 5 (CO 4)

(c) Explain Halstead's metrics for the following :—

(i) Source code.

(ii) Testing. 5 (CO 4)

6. Write detailed note on (any **Two**) :—

(i) Formal Technical Review.

(ii) Layers of SCM.

(iii) Change Control Process. 10 (CO 4)