Course Code : CST 315/CST 303 **KRSJ/RS – 18 / 3055**

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 against them.
(2) Due credit will be given to neatness and adequate dimensions.
(3) Assume suitable data and illustrate answers with neat sketches wherever necessary.

1. Attempt any **Two** of the following :—

   (a) What problems are associated with prototyping model ? Discuss various Customer Myths in detail. 5(CO 1)

   (b) Describe RAD model of software development. When this model is preferred by developer ? How it outperforms the incremental model ? 5(CO 1)

   (c) Discuss the unified process model for software development. 5(CO 1)

2. Attempt any **Two** of the following :—

   (a) Enlist any five agile principles. Describe all phases of XP model in detail. 5(CO 1,CO 2)

   (b) Explain why requirement elicitation is difficult. Explain the basic guidelines of conducting collaborative requirement gathering meetings. 5(CO 1,CO 2)

   (c) What are the objectives of software testing ? List down the various testing principles. 5(CO 1,CO 2)

3. Attempt any **Two** of the following :—

   (a) Enlist the elements of analysis model. Describe the domain analysis with appropriate example. 5(CO 2)

   (b) How one can determine whether a potential class becomes an analysis class? Explain suitably. 5(CO 2)

   (c) Explain any five design concepts with suitable examples. 5(CO 2)

4. Attempt any **Two** of the following :—

(a) Discuss the overall strategy for software testing in detail. 5(CO 3)

(b) Explain the process of debugging with an appropriate diagram. Explain why debugging is considered as a difficult task. 5(CO 3)

(c) Differentiate between the following :—

(i) Verification and Validation.

(ii) Top down integration and Bottom up integration. Explain Equivalance Partitioning method with examples. 5(CO 3)

5. (a) Write a detailed note on Defect removal efficiency. 4(CO 4)

(b) What is Risk ? What types of risks are likely to occur in software building? Differentiate between Proactive and Reactive risk strategies. 6(CO 4)

OR

(c) Explain the following concepts in the context of project scheduling with an example :—

(i) Task Network

(ii) Timeline charts. 6(CO 4)

6. (a) Explain reverse engineering process. 5(CO 4)

OR

(b) Explain SCM (software configuration management) process. 5(CO 4)

(c) Explain Function point metrics. For the following data calculate the function point value.

No. of User Inputs = 34, No. of User Outputs = 60, No. of User enquiries = 24, No. of Files = 10, No. of external interface = 3 Complexity values : Average for all F_i =56

If the organizational average productivity for the system of this type is 6.5 FP/ month, with labor rate of Rs. 1500 per month., calculate cost per FP, total project cost. 5(CO 4)