National Institute of Technology, Kurukshetra

Theory Examination

December-2018

Exam: B.Tech 3rd Semester — Roll No.....

Subject: Software Engineering — Paper Code: ITPC 27

Max Time 3:00 Hrs — Max Marks: 50

Note: Attempt any five Questions.

Q. No. 1. (a) List out any five software life cycle model. Give detailed characteristics for selection of life cycle model.

(b) Describe process steps for Requirement Engineering. (4+4+2)

(c) Why Software Engineering is said to be layer Technology?

Q. No. 2. (a) How you will describe properties of an entity in ER diagram? Explain the various types of that property with the help of example.

(b) List out characteristics of good software requirement specification. (4+4+2)

(c) Why Function point metric is better than Line of Code?

Q. No. 3. (a) Distinguish between following:
(i) Deliverables and Milestones
(ii) Generic product and customized product (4+4+2)

(b) What do understand by Data dictionary? Describe various notations that are used in it.

(c) List out two limitations of DFDs.

Q. No. 4. (a) Consider a project with following functional units:
No. of I/P =50
No. of O/P =40
No. of user inquiries =35
No. of Files =6
No. of External Interfaces =4

(b) How you can compute estimated program level and Difficulty? Which metric can be used for determining amount of data. (4+4+2)

(c) How cost drivers are categorized in Intermediate COCOMO Model?

Q. No. 5. (a) A program is executed to have 500 faults. It is also assume that one fault may lead to one failure only. The initial failure intensity was 2 failures / cpu hr. the program was to be released with failure intensity objective of 5 failure/100 cpu hr. Calculate number of failure experienced before release.

(b) Describe the principle on which Reuse Oriented Model of Maintenance is based. Describe the various steps in this model. (5+5)

Q.No. 6. (a) Why we use CMM? Describe characterization for each maturity level of CMM.

(b) Distinguish between Boundary Value Analysis and Robustness Testing. (5+5)