
Indian Institute of Engineering Science and Technology, Shibpur

B. Tech (CST) 6th Semester Endsem Examination, 2023

Software Engineering (CS 3203)

Full Marks: 50

Time: 3 Hours

Answer Q.1, Q.2 and any two from the rest

Use diagrams and examples wherever needed

I. Choose the correct alternative

- a) What is Software Engineering?
 - (i) Designing a software (ii) Testing a software
 - (iii) Application of engineering principles to develop a software (iv) None of the above
- b) What are the features of Software Code?
 - (i) Simplicity (ii) Modifiable (iii) Modularity (iv) All
- c) In agile model project management emphasizes on
 - (i) incremental progress (ii) decremental progress (iii) neutral progress (iv) no progress
- d) CASE stands for
 - (i) Computer-Aided Software Engineering (ii) Control Aided Science and Engineering
 - (iii) Cost Aided System Experiments (iv) None
- e) Functional Requirement specifies the tasks that a software
 - (i) must complete (ii) should not complete (iii) may complete (iv) All
- f) Which one is the generic model of software development?
 - (i) Iterative waterfall (ii) Prototypic (iii) Spiral (iv) None
- g) DFD is used for describing
 - (i) object-oriented design (ii) procedure-oriented design (iii) Both (iv) None
- h) White Box techniques are also classified as
 - (i) functional testing (ii) structural testing (iii) error guessing technique (iv) None
- i) What testing is performed immediately after module development?
 - (i) Unit Testing (ii) System Testing (iii) Integration Testing (iv) All
- j) SRS is said to be consistent if and only if
 - (i) requirements can be made easily (ii) software meets every requirement
 - (iii) every requirement is verifiable (iv) requirements do not conflict with each other

(1x10=10)

2. Briefly describe the followings.

- a) Stub and driver b) Control flow graph c) Coding standards
- d) Work breakdown structure e) ISO certification f) Types of software prototype
- g) Software verification and validation h) Labelling and metaphor in user's interface design
- i) Graphical widget j) Types of software maintenance

(2×10=20)

3.a) What are the factors considered for feasibility study of a software?

b) Discuss the classical waterfall model and the evolutionary model for the software development.

(2+8)

4.a) Which one is more efficient approach for coding and why? (i) $x \leftarrow y + y$ (ii) $x \leftarrow 2 \times y$

b) Briefly discuss (i) types of debugging methods. (ii) dead code elimination technique.

(2+4+4)

5.a) What are the responsibilities of a software project manager?

b) Discuss shortcomings of LOC for project size estimation.

c) Discuss PERT CPM with an example scenario.

(2+4+4)