

9/5/2022

**Indian Institute of Engineering Science and Technology Shibpur**  
**Department of Computer Science and Technology**  
**BTech (CST), 6th Semester, End Semester Examination, 2022**  
**Software Engineering (CS-3203)**

**Full marks: 60**

**Time: 2 Hours**

*Strictly follow the instructions*

- Answer only six questions
- Write all parts for any attempted question together and in the order mentioned in question paper.
- For descriptive questions arrange your answer pointwise and discuss each point with not more than 60 words.
- Use appropriate diagrams wherever desired.

1. Write a short note on

- i. Control flow graph   ii. Functional format vs project format staff organization   iii. COCOMO  
iv. Good enough software [2  $\frac{1}{2}$  × 4]

2. Write a short note on

- i. Use case diagram   ii. ISO certification   iii. CLI vs GUI   iv. Big-Bang testing [2  $\frac{1}{2}$  × 4]

3. What is static whitebox testing? Write pseudocode for binary search algorithm and illustrate its complete execution through 'Desk Checking' method. [2+8]

4. How do we represent function oriented architectural design of software? Draw and discuss structure chart of basic stack operations where stack is made of an array or a singly linked list. [2+8]

5. What is risk factor in software development? Discuss 'Risk information sheet' and 'Risk table' briefly. [2+8]

6. What is the role of debugger in program development? Discuss various types debugging techniques briefly. [2+8]

7. What is line of code? "Line of Code cannot be absolute way of project size estimation"- Discuss in favour of this statement [?+8]

8. What is graphical widget used for? Discuss at least four criteria for good user interface design. [2+8]