

U.G. 4th Semester Examination - 2021

COMPUTER SCIENCE

Course Code: BCOSCCHC402

Course Title: Software Engineering

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any **ten** questions: 1×10=10
- a) What is requirement engineering?
 - b) Write the full form of SRS.
 - c) Which of these software engineering activities are not a part of software process -
 - i) Software development
 - ii) Software dependence
 - iii) Software validation
 - iv) Software specification
 - d) What is SDLC?

- e) White box testing is sometimes called -
 - i) Graph testing
 - ii) Basic path
 - iii) Glass box testing
 - iv) Data flow
- f) Which of the following is not desired in a software requirement specification document -
 - i) Non-functional requirements
 - ii) Goals of implementation
 - iii) Functional requirements
 - iv) Algorithms of software
- g) How many numbers of maturity levels in CMM are available?
- h) What are the attributes of a good software -
 - i) Software functionality
 - ii) Software maintainability
 - iii) Software development
 - iv) Both software functionality and maintainability
- i) Which model can be selected if the user is involved in all phases of SDLC -
 - i) Waterfall model

- ii) Prototyping model
 - iii) RAD model
 - iv) Both prototyping and RAD model
- j) The minimum error distribution in the period of software development is in -
- i) Coding
 - ii) Design phase
 - iii) Testing
 - iv) Requirement analysis
- k) Actual programming of software code is done during the _____ step in SDLC -
- i) Maintenance and evaluation
 - ii) Design
 - iii) Analysis
 - iv) Development and documentation
- l) What is software engineering?
- m) Write the full form of DFD.
- n) Which model is known as the meta model?
- o) Write the full form of the RAD model.
2. Answer any **five** questions: $2 \times 5 = 10$
- a) Write the difference between Black Box Testing and White Box Testing.
 - b) Define Cyclomatic complexity with example.

- c) Why Software Engineering is called as Layered Approach?
 - d) What is the difference between Level 0 DFD and Level 1 DFD?
 - e) What do you mean by Software Quality Assurance?
 - f) Write the advantages of Spiral Model.
 - g) What is CASE Tools?
 - h) Write the difference between verification and validation.
3. Answer any **two** questions: $5 \times 2 = 10$
- a) What is a software metric? What is software configuration management?
 - b) What are the importances of the design phase? What are the tasks performed in the coding phase?
 - c) What is feasibility study? What are the maturity levels of CMM?
4. Answer any **one** question: $10 \times 1 = 10$
- a) Discuss COCOMO Model in Software Engineering.
 - b) Discuss about different testing strategies.
 - c) Explain why it is not prudent to use the iterative waterfall model for developing very large software product?