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Code No: CS3502

SRGEC-R20

II B.Tech II Semester Supplementary Examinations, January 2023

SOFTWARE ENGINEERING

(Computer Science and Engineering & Artificial Intelligence and Data Science)

Time: 3 Hours

Max. Marks: 70

Note: Answer one question from each unit.

All questions carry equal marks.

$5 \times 14 = 70M$

UNIT-I

1. a) Discuss the importance of feasibility study in software development life cycle models. (7M)

b) Explain Briefly about classical Waterfall model? (7M)

(OR)

2. a) Outline the limitations of waterfall model. Can we overcome these limitations using iterative model? Discuss. (7M)

b) List the advantages and disadvantages of Prototyping model. (7M)

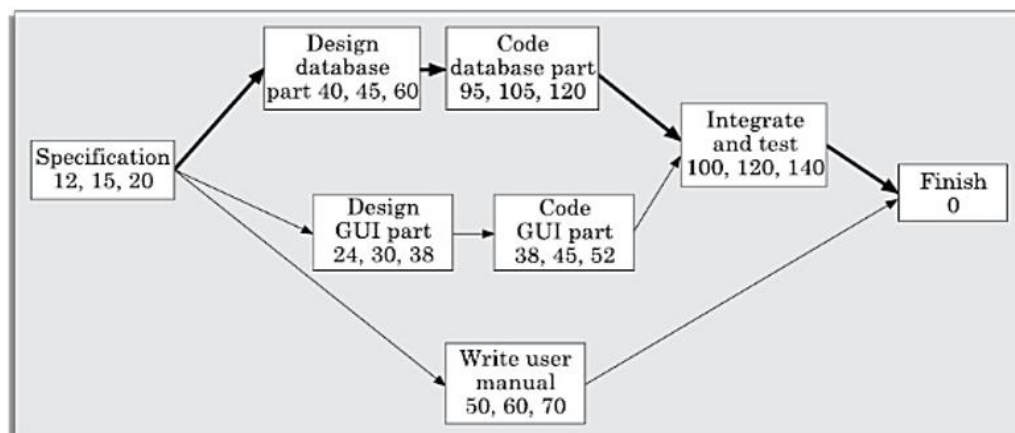
UNIT-II

3. a) A project size of 200 KLOC is to be developed. Software development team has average experience on similar type of projects. The project schedule is not very tight. Calculate the effort, development time, average staff size and productivity of the project. (7M)

b) List the important items that a software project management plan (SPMP) document should discuss. (7M)

(OR)

4. a) Explain about PERT chart and calculate the estimated time for the given activity diagram. (8M)



b) What is LOC based measurement? What is its usefulness? (6M)

UNIT-III

5. a) Who are the different category of users of the SRS document? In what ways is the SRS document useful to them? (7M)
- b) What do you understand by requirements gathering? Name and explain the different requirements gathering techniques that are normally deployed by an analyst. (7M)

(OR)

6. a) What are the goals of the requirements analysis and specification phase? (7M)
- b) What are the Important Categories of Customer Requirements? (7M)

UNIT-IV

7. a) Illustrate an Activity diagram for "Library management system". (8M)
- b) Explain object oriented design. (6M)

(OR)

8. a) What are the different relationships that can be modeled between classes? Explain. (7M)
- b) Specify two kinds of interaction diagrams and explain them with suitable example. (7M)

UNIT-V

9. a) Illustrate about statement coverage in White-Box Testing. (6M)
- b) A program reads an integer number within the range [1,100] and determines whether it is a prime number or not. Design test cases for this program using BVC. (8M)

(OR)

10. a) What is control-flow testing? Illustrate McCabe's cyclomatic complexity metric with an example. (7M)
- b) What are different levels of testing? Differentiate Error, Fault and Failure. (7M)
