Reg. No. : | | | | | | | | | | |

Question Paper Code: 41326

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

Third Semester

Computer Science and Engineering

14UCS306 - SOFTWARE ENGINEERING

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Build and Fix model is suitable for programming exercises of _____ Line of Code.

    (a) 100-200   (b) 200-400
    (c) 400-1000   (d) above 1000

2. Which model can be selected if user is involved in all the phases of SDLC?

    (a) Waterfall Model   (b) Prototyping Model
    (c) RAD Model   (d) both (b) and (c)

3. Which of the following is not a diagram studied in requirement analysis?

    (a) Use Cases   (b) Entity Relationship Diagram
    (c) State Transition Diagram   (d) Activity Diagram

4. The SRS is said to be consistent if and only if

    (a) its structure and style are such that any changes to the requirements can be made
        easily while retaining the style and structure
    (b) every requirement stated therein is one that the software shall meet
    (c) every requirement stated therein is verifiable
    (d) no subset of individual requirements described in it conflict with each other

5. In the analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.

    (a) documentation   (b) flowchart

    (c) program specification   (d) design

6. What incorporates data, architectural, interface, and procedural representations of the software?

    (a) design model   (b) user's model

    (c) mental image   (d) system image

7. By collecting _____ during software testing, it is possible to develop meaningful guidelines to halt the testing process.

    (a) Failure intensity   (b) Testing time

    (c) Metrics   (d) All the above

8. What is Cyclomatic complexity?

    (a) Black box testing   (b) White box testing

    (c) Yellow box testing   (d) Green box testing

9. Which of the following is incorrect activity for the configuration management of a software system?

    (a) Internship management   (b) Change management

    (c) Version management   (d) System management

10. What threatens the viability of the software to be built?

    (a) Known risks   (b) Business risks

    (c) Project risks   (d) Technical risks

PART - B (5 x 2 = 10 Marks)

11. List the task regions in the spiral model.

12. What is requirement engineering?

13. Differentiate hard real time and soft real time systems.

14. What are the testing principles must be applied while performing the software testing?

15. Define RFP risk Management.

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PART - C (5 x 16 = 80 Marks)

16. (a) Explain iterative waterfall and spiral model for software life cycle and various activities in each phase. (16)

Or

(b) Explain COCOMO model in detail? (16)

17. (a) Explain in detail about functional and non functional system requirements. (16)

Or

(b) Explain in detail about software document. (16)

18. (a) Describe the metrics for the design model of a product. What are the attributes of effective software metrics? (16)

Or

(b) Describe the important principles and steps of user interface analysis and design. (16)

19. (a) Suppose a program contains 4 decision points, each of which has two branches. How many test cases are needed to perform path testing on such a program? Show clearly how you arrived at the answer. (16)

Or

(b) Describe the various testing strategies. (16)

20. (a) Estimate the effort required to develop software for a simple module that produces 15 screens, 10 reports and will require around 100 software components. Assume average complexity and average developer / environment maturity. Use the application composition model of COCOMO-II with object points. State any assumptions you make. (16)

Or

(b) Explain elaborately the various strategies and steps involved in risk management. (16)

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