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

**Question Paper Code: 41236**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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. Which one of the following models is not suitable for accommodating any change?

   (a) Build AND Fix Model (b) Prototyping Model
   (c) RAD Model (d) Waterfall Model

2. Which one of the following is not an Umbrella Activity that complements the four process framework activities and help team manage and control progress, quality, change, and risk?

   (a) Re-usability management (b) Risk management
   (c) Measurement (d) User Reviews

3. QFD stands for

   (a) quality function design (b) quality function development
   (c) quality function deployment (d) none of these

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. In what type of coupling, the complete data structure is passed from one module to another?

(a) Control Coupling (b) Stamp Coupling
(c) External Coupling (d) Content Coupling

7. Software Requirement Specification (SRS) is also known as specification of

(a) White box testing (b) Acceptance testing
(c) Integrated testing (d) Black box testing

8. Which testing is the re-execution of some subset of tests that have already been conducted to ensure the changes that are not propagated?

(a) Unit testing (b) Regression testing
(c) Integration testing (d) Thread-based testing

9. What is related to the overall functionality of the delivered software?

(a) Function-related metrics (b) Product-related metrics
(c) Size-related metrics (d) None of these

10. What assess the risk and your plans for risk mitigation and revise these when you learn more about the risk?

(a) Risk monitoring (b) Risk planning
(c) Risk analysis (d) Risk identification

PART - B (5 x 2 = 10 Marks)

11. Define software engineering by IEEE.

12. What is meant by Petrinets?

13. What are the types of interface design?

14. Define cyclomatic complexity?

15. What are direct and indirect measures of software?

PART - C (5 x 16 = 80 Marks)

16. (a) Explain the linear software life cycle model with neat diagram. Bring out the merits and demerits of this model. (16)

Or

(b) How does system engineering different from software engineering? Also write brief notes on computer based systems and system engineering hierarchy. (16)

17. (a) Explain in details the requirements engineering tasks in detail. (16)

Or

(b) (i) Differences between functional and non-functional requirements. (8)

(ii) Short notes on software requirements document with example. (8)

18. (a) What are the different types of architectural styles exist of software and explain any one software architecture in detail. (16)

Or

(b) Explain the fundamental software design concepts in detail. (16)

19. (a) Discuss the differences between black box and white box testing and suggest how they can be used together in the testing process. (16)

Or

(b) (i) Explain the steps applied to derive the basis set. Use an example to illustrate each step in the test case design. (8)

(ii) Explain the different integration testing approaches. (8)

20. (a) What are the metrics used for estimating cost? Discuss in detail about the COCOMO model in cost estimation of the software? (16)

Or

(b) Discuss in detail about the risk management. (16)

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