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Question Paper Code: 54804

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Fourth Semester

Information Technology

15UIT404 – SOFTWARE ENGINEERING METHODOLOGIES

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Arrange the following steps in the linear process flow of software process model. CO1- R
 - i.Planning
 - ii.Construction
 - iii.Communication
 - iv.Deployment
 - v. Modeling

(a) i, iii, v, ii, iv (b) i, iii, v, ii, iv (c) i, v, iii, ii, iv (d) v, i, iii, ii, iv
2. Which one of the following is NOT desired in a good Software Requirement Specifications (SRS) document? CO2- R
 - (a) Functional Requirements
 - (b) Non-Functional Requirements
 - (c) Goals of Implementation
 - (d) Algorithms for Implementation
3. In the context of modular software design, which one of the following combinations is desirable? CO3- R
 - (a) High cohesion and high coupling
 - (b) High cohesion and low coupling
 - (c) Low cohesion and high coupling
 - (d) Low cohesion and low coupling

4. Match the following testing class with the testing type. CO4- R

Testing Class	Testing Type
A. Condition coverage	1. Black-box testing
B. Equivalence class partitioning	2. System testing
C. Volume testing	3. White-box testing
D. Alpha testing	4. Performance testing

(a) A-2, B-3, C-1, D-4 (b) A-3, B-4, C-2, D-1

(c) A-3, B-1, C-4, D-2 (d) A-3, B-1, C-2, D-4

5. Commitments to unrealistic time and resource estimates may result in _____ CO5- R

(a) Project delay (b) Problem elaboration (c) Quality work (d) Project success

PART – B (5 x 3= 15 Marks)

6. Justify why agile development is considered to be a reasonable alternative to conventional software engineering process. CO1- U
7. Classify the seven significant tasks in requirements engineering process CO2- U
8. Summarize the three golden rules of user interface design CO3- U
9. Distinguish between black box and white box testing CO4- R
10. Discuss about the people who involved in software project management CO5- U

PART – C (5 x 16= 80 Marks)

11. (a) (i) Explain the process model which is useful when staffing is unavailable for complete implementation. CO1- U (8)

(ii) Discuss the prototyping paradigm in software process. CO1- U (8)

Or

(b) Illustrate the process models to be adopted when a specialized or narrowly defined software engineering approach is chosen. CO1- U (16)

12. (a) (i) State the functional and non-functional requirements for the banking website design with illustrations and justifications. CO2- App (10)

(ii) Develop a use-case scenario for withdrawal from ATM CO2- App (6)

Or

- (b) Explain the different approaches followed in establishing the groundwork and requirement elicitation for understanding requirements. CO2- U (16)
13. (a) (i) Explain real time system. Summarize the design considerations for real time systems. CO3- U (8)
- (ii) Explain the steps involved in architectural mapping using data flow. CO3- U (8)
- Or
- (b) (i) Classify and brief different types of coupling. CO3- U (8)
- (ii) Demonstrate how to apply the user interface design steps using a suitable example. CO3- App (8)
14. (a) Explain the top-down and bottom-up strategies of Integration testing. CO4- U (16)
- Or
- (b) Describe Software Configuration Management features and SCM process in detail. CO4- U (16)
15. (a) Discuss the empirical estimation models for software cost estimation. CO5- U (16)
- Or
- (b) Explain in detail about the process of Software project scheduling and tracking the schedule. CO5- U (16)

