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Question Paper Code: 54205

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

Fourth Semester

Computer Science and Engineering

15UCS405- SOFTWARE ENGINEERING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Software consists of _____ CO1- R
 - (a) Instructions +operating procedures
 - (b) Programs+ documentation+ operating procedure
 - (c) Programs + hardware manuals
 - (d) Set of programs

2. Abbreviate the term SRS. CO2- R
 - (a) Software Requirement Specification
 - (b) Software Refining Solution
 - (c) Software Resource Source
 - (d) None of the above

3. Which is the most desirable form of coupling? CO3- R
 - (a) Control coupling
 - (b) Data coupling
 - (c) Common coupling
 - (d) Stamp coupling

4. Behavioral testing is a CO4- R
 - (a) White box testing
 - (b) Black box testing
 - (c) Grey box testing
 - (d) Red box Testing

5. Which of the following is/are Project Estimation Technique? CO5- R
 - (a) Empirical Estimation Technique.
 - (b) Heuristic Estimation Technique.
 - (c) Analytical Estimation Technique.
 - (d) All of the above.

PART – B (5 x 3= 15 Marks)

6. Demonstrate your understanding of umbrella activities of a Software process CO1- U
7. Give a use case diagram for an online shopping which should provide provisions for registering authenticating the customers and also online payment through any payment gateway like PayPal. CO2- App
8. List various types of architectural styles with example. CO3- R
9. Differentiate verification and validation. CO4- U
10. Write about decomposition techniques in software project estimation. CO5- R

PART – C (5 x 16= 80 Marks)

11. (a) Define software life cycle. List all life cycle models and explain spiral model with a neat sketch. CO1- U (16)
Or
(b) Illustrate about CMMI process improvement framework with an example. CO1- U (16)
12. (a) (i) Differentiate functional and non-functional requirements. CO2- U (8)
(ii) Give the steps involved in initiating requirements engineering. CO2- U (8)
Or
(b) Analyze about the requirement engineering process and how the requirements are managed. CO2- U (16)
13. (a) Explain about software architecture design with emphasize as fan in, fan-out, coupling, cohesion and factoring. CO3- U (16)
Or
(b) (i) Generalize on the concept of user interface design and list the characteristics of a good user interface design. CO3- U (8)
(ii) Summarize the design issues in interface design. CO3- U (8)
14. (a) (i) Summarize on Top-down Integration testing and Bottom -up integration testing. CO4- U (6)
(ii) Discuss about the art of debugging in detail. CO4- U (10)

Or

- (b) Define black box testing. Explain the different types of black box testing strategies by considering suitable examples. CO4- U (16)
15. (a) Discuss on the following CO5- U (8)
- (i) LOC based estimation.
- (ii) Function Point estimation. CO5- U (8)
- Or
- (b) Illustrate about the COCOMO II model for software estimation with its elements. CO5- U (16)

