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B.E / B.Tech (Full Time) END SEMESTER EXAMINATIONS APR/MAY 2019
COMPUTER SCIENCE AND ENGINEERING & INFORMATION TECHNOLOGY

FOURTH Semester

CS8452 – SOFTWARE ENGINEERING

(Regulation 2012)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What led to the transition from product oriented development to process oriented development?
2. What are the various aspects of earned value analysis?
3. The basic goal of the requirements activity is to get an SRS that has some desirable properties.
4. What is the role of modeling in developing such an SRS?
5. Differentiate between enduring and volatile requirements.
6. What is the need for architectural mapping using data flow?
7. How can refactoring be made more effective?
8. Define equivalence class testing.
9. List a few process and product metrics.
10. What is the role of testing w.r.t to software quality?



Part – B (5 X 16 = 80 Marks)

11. (a) Write in detail about the FP based estimation. Highlight the issues involved in FP based estimation.

12. (a) Explain the organization of SRS and highlight the importance of each subsection.

(OR)

- (b) (i) Differentiate between functional and non-functional requirements. (4)

- (ii) Describe the requirements change management process in detail. (12)

(4 X 4 = 16)

13. (a) Write short notes on the following.

- (i) Architectural design
- (ii) User-interface design
- (iii) Component level design
- (iv) Data/Class design

(OR)

(b) Explain the various coupling and cohesion strategies.

14. (a) Explain the various levels of testing in detail.

(OR)

(b) (i) Compare and contrast alpha and beta testing. (8)

(ii) Consider a program for determining the previous date. Its input is a triple of day, month and year with the values in the range $1 \leq \text{month} \leq 12$, $1 \leq \text{day} \leq 31$, $1990 \leq \text{year} \leq 2014$. The possible outputs would be previous date or invalid input date. Design the boundary value test cases. (8)

15. (a) Write short notes on the following:

(i) Make/Buy decision (8)

(ii) COCOMO II (8)

(OR)

(b) (i) An application has the following: 10 low external inputs, 8 high external outputs, 13 low internal logical files, 17 high external interface files, 11 average external inquires and complexity adjustment factor of 1.10. What are the unadjusted and adjusted function point counts? (4)

(ii) Explain earned value analysis in detail. (12)

