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Question Paper Code : 95341

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Elective

Software Engineering

ESE 520 — SOFTWARE RELIABILITY

(Regulations 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate software faults Vs software errors.
2. Define software reliability.
3. Define software schedule.
4. Expand Ada COCOMO.
5. Define fault avoidance.
6. Define organizational metrics.
7. Expand and define RPN.
8. What is Trend analysis?
9. Define logical testing.
10. Define Reusability. Give an example.

PART B — (5 × 16 = 80 marks)

11. (a) Discuss the different views of software reliability? Briefly explain the importance of SRS. (16)

Or

- (b) What are the causes of unreliability in software? State and explain the dependable system of software product in term of reliable, safe, secure, maintainable and available in detail. (16)

12. (a) Discuss the principles and procedure adopted in waterfall model or linear sequential model. (16)

Or

- (b) Show the schematic diagram of spiral model. Explain the important features, limitations and application of RAD model. (16)

13. (a) Describe the five levels of CMM in detail. (16)

Or

- (b) Classify and explain the software reliability metrics. (16)

14. (a) Elaborate the overview of software reliability models. (16)

Or

- (b) Explain the procedure adopted in the software cost estimation model namely COCOMO. (16)

15. (a) Discuss the procedure adopted in software product/design FMEA? (16)

Or

- (b) Write short notes for the following.

(i) Functional testing. (4)

(ii) Algorithm testing. (4)

(iii) Regression testing. (4)

(iv) FTA. (4)