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Question Paper Code : 11606

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Elective

Network Engineering

NE 9254/CS 972/ 10244 CCE 51 — SOFTWARE ENGINEERING METHODOLOGIES

(Common to M.E. Computer and Communication Engineering/M.E. Computer and Communication/M.E. Computer Networking and Engineering)

(Regulation 2009/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How is a software project development tracked and state what are the outcomes?

2. State the influence of technology complexity factor in the effort estimation.

3. Is it necessary to perform both verification and validation for real time systems?

4. How do you justify the number of modules for a given project?

5. What is a use case? How it is used in software engineering?

6. State the importance of external documentation. Is it related with user interface design?

7. Define reliability of a software. It is assured based on testing results? Justify.

8. Who has to certify for acceptance testing for a software? Why?

9. What are maintenance characteristics? How they can be measured?

10. What are the implications of software licensing and certification?

PART B — (5 × 16 = 80 marks)

11. (a) How can software process be modelled? Illustrate few models and give their comparison. Which one can be best suited for real time system and state why? How the project can be managed?

Or

(b) Describe the software planning activities. Illustrate the milestones at each step and how they can be monitored? How can risks, if any, be managed?

12. (a) How can requirements for a software be collected and elicited? What are the modeling notations and write the salient features of specification languages?

Or

(b) What are the software architectural styles and describe various factors such as factoring, fan in, fan out, coupling and cohesion and their in fluences on the project.

13. (a) Explain object oriented development activities of a software. What are the advantages? Is it ease for implementation? Justify.

Or

(b) Discuss the object oriented program design and list out the standards and guidelines of programming.

14. (a) How are automated testing tools designed and developed? Are the results same as the results of unautomated testing results? Are all faults found out using testing? Justify.

Or

(b) Illustrate the importance of test documentation. How testing is planned and carried out for a safety critical system?

15. (a) Describe suitable schemes for measuring and evaluating software products.

Or

(b) Explain software maintenance of techniques and tools. Is the cost spent for preventive maintenance worth? Justify.