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Question Paper Code : 65242

5 Year M.Sc. DEGREE EXAMINATION, MAY/JUNE 2013.

Second Semester

Software Engineering

ESE 021 — SOFTWARE ENGINEERING I

(Regulation 2010)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the relationship between process models and process specification?

2. Which of the development process can be followed for the missile tracking system project? Justify your answer.

3. State the pros and cons of the function points.

4. Write a set of non functional requirements for aircraft control system.

5. List down the limitations of Cost estimation Model.

6. State some of the factors that improve the team's productivity.

7. Differentiate between architecture and system level design.

8. Give example for calculating the cohesion of a module. Give the changes in the module to increase cohesion.

9. What are the major concepts that make the program readable?

10. Write down the potential draw back of doing coding process using pair programming.

PART B — (5 × 16 = 80 marks)

11. (a) (i) How does the use of configuration management system simplifies the version management process.   (8)

    (ii) Explain why programs developed using evolutionary development are likely to be difficult to maintain.   (8)

Or

(b) (i) What types of effect will the project monitoring activity of the project management process have in the development process? Explain with examples. (8)

(ii) Explain in detail about spiral model? Discuss how the spiral model can be adapted through out the life cycle of the software. (8)

12. (a) (i) Write the SRS for a simple student registration system and give the analysis. (8)

(ii) Identify functional specification of the ticket selling system using use cases? Discuss it in detail. (8)

Or

(b) (i) Draw the context level DFD for a simple invoicing system for a small business and write a note on context level processing. (8)

(ii) Write in brief about the metrics for specification of Quality in requirements. (8)

13. (a) (i) Design a suitable quality plan for a project to manage the registration and enrollment activities in a Course registration system. (8)

(ii) Write in brief about Project scheduling and staffing level estimation using COCOMO Model. (8)

Or

(b) (i) Discuss in brief about multivariable cost estimation model. Compare it with single variable cost model. (8)

(ii) Elaborate about the idea, concepts and techniques of risk management process. (8)

14. (a) (i) Use the structure design methodology to produce design for a restaurant. (8)

(ii) Discuss in detail about modules and modularization criteria. Give example for the modification of program to improve the modularity. (8)

Or

(b) (i) Draw a detailed design process diagram for a system which involves many persons, each developing the detailed design for a set of modules. (8)

(ii) Give the function oriented design for the stock monitoring system. Give the detailed view of structured Charts. (8)

15. (a) (i) Discuss in detail about the structured programming concepts. Write about its efficiency consideration and its validations. (8)

(ii) What is Halstead's size measure for the programming module? Compare this size measure with LOC size measure. (8)

Or

(b) (i) Derive the correlation between the complexity measure and size measure metrics with suitable example. State whether the "error proneness" of the module can be identified using complexity measure. (8)

(ii) Explain in detail about refactoring concepts and process with suitable example. (8)

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