

2002 SCHEME

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CS62

Sixth Semester B.E. Degree Examination, December 2010 Software Engineering

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

1. a. What are the four important attributes which all software products should have? Suggest four other attributes which may be significant. (04 Marks)
b. Explain the general model of the design process. (06 Marks)
c. With the help of a neat diagram, briefly explain Boehm's spiral model of a software process. What are its advantages over waterfall model? (07 Marks)
d. "Programs developed using evolutionary development are likely to be difficult to maintain". Justify. (03 Marks)
2. a. Explain rapid prototyping in software development. List the rapid development techniques that are practical for developing industrial strength prototypes. Explain how component and application assembly helps in rapid prototyping. (08 Marks)
b. Explain the structure of a requirement document. (06 Marks)
c. Explain the principal stages of VORD method. (06 Marks)
3. a. With an example, describe the client / server model and discuss its advantages and disadvantages. (07 Marks)
b. Design the state chart for a weather station object, that show how it responds to request for various services. (07 Marks)
c. Give the user interface design principle. (06 Marks)
4. a. What do you mean by clean room software development? Explain the key characteristics the clean room approach is based on, with neat figure. Which are the three teams involved when the clean room process is used for a large system? (09 Marks)
b. Give the structure of the software test plan. (06 Marks)
c. List the different roles played by the team in the inspection process. (05 Marks)
5. a. Distinguish between black box testing and structural testing. (07 Marks)
b. Explain the general guidelines for interface testing. (06 Marks)
c. What is cyclomatic complexity? Figure shows the simple connected graph G of a program. Find the cyclomatic complexity and indicate the minimal set of paths. (07 Marks)

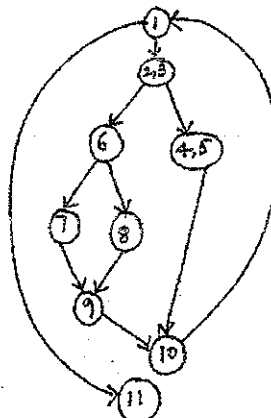


Fig. Q5(c)

- 6 a. Table below sets out the number of activities, duration and dependencies. Draw an activity chart showing the project schedule. Find the critical path. (10 Marks)

Task	T ₁	T ₂	T ₃	T ₄	T ₅	T ₆	T ₇	T ₈	T ₉	T ₁₀	T ₁₁	T ₁₂
Duration (days)	8	15	15	10	10	5	20	25	15	15	7	10
Dependencies			T ₁ (M ₁)		T ₂ T ₄ (M ₂)	T ₁ T ₂ (M ₃)	T ₁ (M ₁)	T ₄ (M ₅)	T ₃ T ₆ (M ₄)	T ₅ T ₇ (M ₇)	T ₉ (M ₆)	T ₁₁ (M ₈)

- b. Project plans vary depending upon the type of project and the organization. Give the structure of a project plan that most plans must include. (08 Marks)
- c. Define Milestone and Deliverable. (02 Marks)
- 7 a. List the factors affecting software pricing. (06 Marks)
- b. Explain the approach used by basic COCOMO81 to estimate person month for a software development. Give the features of COCOMO model. (08 Marks)
- c. List the areas covered by ISO 9001 model for quality assurance. (06 Marks)
- 8 Write short notes on :
- a. Data dictionary. (05 Marks)
- b. Use cases for library system. (05 Marks)
- c. Legacy system. (05 Marks)
- d. Reverse engineering. (05 Marks)
