

IV B.Tech II Semester Supplementary Examinations, May 2008
SOFTWARE PROJECT MANAGEMENT
 (Common to Computer Science & Engineering and Information
 Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the method of COCOMO estimation with the following example. Give the advantages and disadvantages of this method.
 A project manager estimates the number of adjusted function points for a project as 1000. The language chosen for implementation maps to about 33.2 LOC per function point. What is the duration of the project and how many persons will it take? What will be the team structure you choose if this is a project involving latest technology with complex functionality? Take minimum time in months, $t_{min} = 8.14[LOC/P]^{0.43}$ in months, where $B = 0.16$ for 5-15 KLOC projects and $B = 0.28$ for > 30 KLOC. Effort in person months $E = 180 Bt^3$ (where t is in years). Take $P = 12,000$.
 (b) Why is the effort (in person-months) not simple a product of duration and number of persons needed? [10+6]
2. (a) Why does software not give as much returns on investment as other industries?
 (b) What are the ways of achieving better economics in Software? [8+8]
3. (a) How will an activity network help in deciding the skills and number of people required during different phases of the project?
 (b) Justify the dividing of the four phases of SW lifecycle into engineering and production stages. [8+8]
4. (a) What are the seven workflows in the lifecycle?
 (b) What levels of activity take place in these workflows during each of the four phases (Inception, elaboration, construction and transition) [8+8]
5. (a) What are the steps in identifying project roles? Name any five 5 project roles and the skills needed for them.
 (b) What are the benefits of matching people to roles? [10+6]
6. (a) What are the sources of change? Why should change be made in a controlled way?
 (b) Define a configuration baseline. [10+6]
7. (a) What is the need for metrics? What do you mean by indicators?
 (b) List the seven core metrics, their purpose and perspectives. [6+10]

Code No: RR420502

Set No. 1

8. (a) What was the purpose of the concept definition (CD) and full scale development (FSD) in the project CCPDS-R?
- (b) How was the project organized in CCPDS-R project? [8+8]

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1. (a) In practice, what are the common symptoms of projects which are not successful?
(b) Compare the apparent and actual results of document and design reviews in the conventional process. [8+8]
2. (a) Explain how the use of good languages and object oriented modeling can reduce the SLOC in software.
(b) What are the issues in obtaining re-usable components? What kind of organizations should be chosen for buying COTS? [8+8]
3. (a) What are the primary objectives of the four phases of SW lifecycle?
(b) What are the essential activities in Inception and elaboration phases? [8+8]
4. What does each of the views (design, process, component, deployment) address in the software architecture? Explain with an example. [16]
5. (a) What are the steps in identifying project roles? Name any five 5 project roles and the skills needed for them.
(b) What are the benefits of matching people to roles? [10+6]
6. (a) What are the sources of change? Why should change be made in a controlled way?
(b) Define a configuration baseline. [10+6]
7. (a) What are the W^5H questions to be answered for a SW measure?
(b) Name metrics for reliability, SW cost, effort, SW complexity with examples. [8+8]
8. What were metrics collected in CCPDS-R? What is the purpose of each metric? [16]

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1. (a) What are the risks in the waterfall model implemented in the traditional way?
(b) How can these risks be eliminated to a large extent still practicing the waterfall model? [8+8]
2. (a) Explain how the use of good languages and object oriented modeling can reduce the SLOC in software.
(b) What are the issues in obtaining re-usable components? What kind of organizations should be chosen for buying COTS? [8+8]
3. (a) What are the primary objectives of the four phases of SW lifecycle?
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4. What does each of the views (design, process, component, deployment) address in the software architecture? Explain with an example. [16]
5. (a) What are the steps in identifying project roles? Name any five 5 project roles and the skills needed for them.
(b) What are the benefits of matching people to roles? [10+6]
6. (a) What is the reason for looking at organizations from project as well as line-of-business perspective?
(b) What are the four component teams in a default line-of-business organization and their responsibility? [8+8]
7. (a) Why are the metrics divided into management and quality indicators? Name the core metrics under each category.
(b) Identify examples of each of the seven core metrics and state their purpose. [8+8]
8. What were metrics collected in CCPDS-R? What is the purpose of each metric? [16]

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1. (a) What are the risks in the waterfall model implemented in the traditional way?
 (b) How can these risks be eliminated to a large extent still practicing the waterfall model? [8+8]

2. (a) What are the relative advantages and disadvantages of custom SW development and development using commercial components?
 (b) Explain the process of buy/build decision with following example. Given the projected costs and probability (in parenthesis). Shown in figure 2b [8+8]

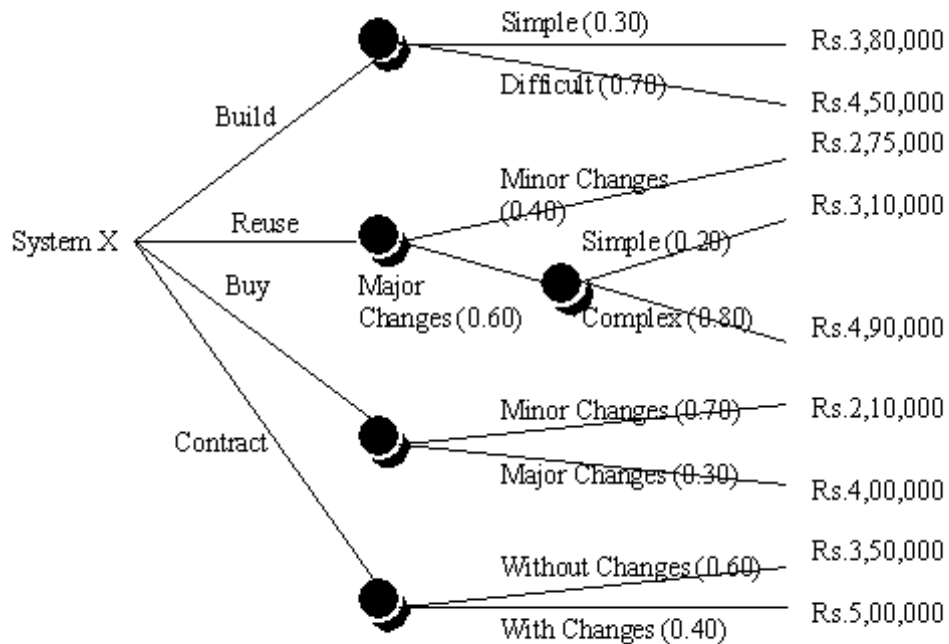


Figure 2b

3. (a) What are the primary objectives of the four phases of SW lifecycle?
 (b) What are the essential activities in Inception and elaboration phases? [8+8]

4. (a) What are the seven workflows in the lifecycle?

- (b) What levels of activity take place in these workflows during each of the four phases (Inception, elaboration, construction and transition) [8+8]
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