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B. E. (Sixth Semester) Examination,  
April/May, 2008  
(CSE Engg. Branch)

SOFTWARE ENGINEERING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All questions carry equal marks. Attempt any two from every question.

1. Attempt any two :

- (i) Draw and explain Spiral Model and justify the kinds of s/w projects best suited. Also state its advantages & disadvantages.

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- (ii) Explain the difference between Verification and Validation. Explain how V & V activities are carried out in various stages of s/w development.
- (iii) Explain System Engineering Hierarchy.

2. Attempt any two :

- (i) Explain Requirements Engineering Process.
- (ii) Explain Software Prototyping with its advantage and disadvantages.
- (iii) Explain Data, Functional and Behavioural models.

3. Attempt any two :

- (i) Explain various kinds of Designs.
- (ii) Explain various types of cohesion and coupling.
- (iii) Explain SCM in details with its utility.

4. Attempt any two :

- (i) Explain various types of Testing.
- (ii) Explain Software Maintenance with its categories.
- (iii) Draw a flow chart to find the roots of a Quadratic Equation. Also derive its

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- (a) Flow Graph
- (b) Cyclomatic Complexity

5. Attempt any two :

- (i) Explain types of Team structures and justify the projects in which they fit in.
- (ii) Explain the difference between Group Discussion and Delphi technique.
- (iii) Explain the COCOMO model.

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B. E. (Sixth Semester) Examination,  
April-May, 2009

(CSE Branch)

SOFTWARE ENGINEERING

Time allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : All the questions carry equal marks. Part (a) in each question is compulsory. Attempt any two from part (b), (c) and (d).

1. (a) Define the term Software Engineering. 2  
(b) Explain in detail about spiral model with neat diagram. 7

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- (c) Give the comparison between different life models. 7  
(d) Explain system Engineering Hierarchy system. 7
2. (a) What is Data Dictionary? 2  
(b) Explain the software prototyping in detail. 7  
(c) Explain the behavioural model in detail. 7  
(d) Explain the functional and non-functional user system. 7
3. (a) What is SCM? 2  
(b) Explain in detail about Architectural design process. 7  
(c) What are the tasks in SCM process? Explain each of them. 7  
(d) Explain in detail about Interface design. 7
4. (a) Define software testing. 2  
(b) Explain about black box testing in detail. 7  
(c) Define test cases & explain about basis path testing. 7  
(d) What is regression testing? Explain. 7
5. (a) What is case repository? 2  
(b) What is cocoma model? Explain. 7

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- (c) Elaborate the types of maintenance. 7  
(d) Discuss the characteristics of Software Engineering. 7

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- Q. 5. (a) What do you mean by S/W complexity. 2
- (b) What is the importance of COCOMO model? Explain the COCOMO model. 7
- (c) Differentiate between milestones and deliverables. 7
- (d) Explain the Delphi cost estimation method. 7

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- (b) What are the '4P' concept in software engineering? Explain them briefly. 7
- (c) Compare & contrast between spiral model and win-win spiral model. 7
- (d) Explain the classic life cycle model for software engineering. What are the advantage & disadvantage of classic life cycle model. 7
- Q. 2. (a) What is the use of S/W document? 2
- (b) What are the various functional & non-functional requirements for developing a S/W? 7
- (c) Explain the behavioral model & data dictionary. 7

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BE (6th Semester)

Examination, April-May, 2010

Branch : CSE

**SOFTWARE ENGINEERING**

Time allowed : Three Hours

Maximum Marks : 80

Minimum Marks : 28

Note : All questions are compulsory. Answer any two parts from among (b), (c) and (d). Draw neat labelled diagram wherever necessary to fetch good marks.

- Q. 1. (a) Differentiate between verification and validation. 2

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- (d) Explain the structure of requirement document. 7
- Q. 3. (a) What do you mean by modular design. 2
- (b) Explain the software control management. 7
- (c) Explain the architectural design S/W architecture with an example. 7
- (d) Explain the user interface design principles. 7
- Q. 4. (a) Why testing is important? 2
- (b) What do you mean by integration testing? Explain the various types of integration testing. 7
- (c) Explain the various basic path testing. 7
- (d) Explain the regression and smoke testing. 7

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- (d) Explain the validation testing, system testing & debugging. 7

Q. 5. (a) What do you mean by software complexity? 2

- (b) Explain the COCOMO model with its related formula. 7

- (c) Define the team structure for successful completion of a project. 7

- (d) Define the Delphi cost estimation model. 7

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BE (6<sup>th</sup> Semester)

Examination, April-May, 2011

Branch : CSE

**SOFTWARE ENGINEERING**

*Time Allowed : Three Hours*

*Maximum Marks : 80*

*Minimum Pass Marks : 28*

**Note :** (i) Each question subpart (a) carries 2 marks & is compulsory.

(ii) Each question subpart (b), (c) and (d) carries 7 marks each and answer any two.

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Q. 1. (a) Differentiate between Verification & Validation. 2

- (b) Explain the waterfall model & its advantages & disadvantages. 7

- (c) Explain the win-win spiral model with neat diagram. 7

- (d) Explain the RAD model with neat diagram. 7

Q. 2. (a) What is functional & non functional requirements? 2

- (b) Explain the software engineering process with neat diagram. 7

- (c) Describe analysis & modeling. 7

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- (d) Explain the rapid prototyping techniques for requirement engineering. 7

Q. 3. (a) Define data dictionary. 2

- (b) Differentiate between cohesion & coupling. 7

- (c) Explain the designing principle. 7

- (d) Explain the DFD for library system. 7

Q. 4. (a) What do you mean by testing? 2

- (b) Explain the following : 7

(i) White box testing.

(ii) Black box testing.

- (c) Explain the unit testing & integration testing. 7

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UNIT - V

- Q. 5. (a) What is software project management ? 2
- (b) Explain COCOMO model in brief. 7
- (c) Why software is measured ? Explain types of measures. 7
- (d) What are CASE Tools ? Explain the relevance of CASE Tools in software engineering. 7

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**322614 (22)**

BE (6<sup>th</sup> Semester)

Examination, April - May, 2012

Branch : CSE

**SOFTWARE ENGINEERING**

Time Allowed : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Part (a) of each question is compulsory. Attempt any two parts from part (b), (c) & (d).

UNIT - I

- Q. 1. (a) Define the term software & software engineering. 2

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- (b) What is the role of model in software engineering ? Explain incremental model. 7
- (c) Give difference between Verification & Validation. 7
- (d) What is Software Development Process ? Explain in brief. 7

UNIT - II

- Q. 2. (a) What is data dictionary ? 2
- (b) Why we need Requirement Engineering Process ? Explain it. 7
- (c) What is software prototyping ? Give benefits of software prototyping. 7
- (d) Why we need feasibility study in requirement engineering process ? 7

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UNIT - III

- Q. 3. (a) What is software design process ? 2
- (b) Give difference between coupling & cohesion. 7
- (c) What is user interface design ? Explain with its principles. 7
- (d) Define software configuration management in brief. 7

UNIT - IV

- Q. 4. (a) What is the need of Testing ? 2
- (b) Explain types of Testing. 7
- (c) What are the various level of Testing. 7
- (d) Discuss various types of maintenance. 7

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B. E. (Sixth Semester) Examination,  
Nov.-Dec., 2008

(CSE Eugg. Branch)

SOFTWARE ENGINEERING

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : To the point answer is mandatory, Which helps  
you to fetch marks.

1. (a) Explain Software Process. 2  
(b) "Linear sequential model is no longer required in  
software engineering." Explain your comments/views  
on this with steps involved in it. 10

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Or

- (c) Explain spiral model with its merits and demerits. 10  
(d) Explain capability maturity model integration (CMMI). 4  
2. (a) Define Legacy system. 2  
(b) Explain Nonfunctional requirement in detail. 10  
Or  
(c) Explain structure of requirement document. 10  
(d) Explain different approaches used in user interface prototyping. 4  
3. (a) Define Abstraction in Design Process of Software. 2  
(b) Explain DFD, Draw context diagram for library management. 10  
Or  
(c) Explain software configuration management. Explain change control. 10  
(d) Define software design process. What are the characteristics of good design? 4  
4. (a) State Pareto principle applies to software testing. 2  
(b) Write down difference between top down integration & bottom up integration. 10

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Or

- (c) Explain Acceptance testing. Define alpha & beta testing. 10  
(d) Define Software testing. What are the software testing methods? 4  
5. (a) Define Risk Management. 2  
(b) Differentiate between milestones & deliverables. 10  
Or  
(c) Explain Barcharts and activity networks in project scheduling. 10  
(d) Explain cocomo model. 4

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**322614 (22)**

BE (6<sup>th</sup> Semester)

Examination, Nov.-Dec. 2009

Branch : CSE

**SOFTWARE ENGINEERING**

Time Allowed : Three Hours

Maximum Marks : 80

Minimum Marks : 28

Note : 1. Question number 1 is compulsory in each unit carrying 2 marks.

2. Attempt any 2 questions from the remaining part from each unit. All questions carry 7 marks.

3. Assume suitable data when it is necessary.

4. Give the pointwise answer.

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**Unit - I**

- |  |   |
|--|---|
| Q. 1. Define Software Engineering.                                   | 2 |
| Q. 2. Explain the WINWIN model with application.                     | 7 |
| Q. 3. Write down the difference b/w the verification and validation. | 7 |
| Q. 4. Explain in brief the development process of software.          | 7 |

**Unit - II**

- |  |   |
|--|---|
| Q. 1. What is the behavioural model ?                  | 2 |
| Q. 2. Explain in brief requirement elicitation.        | 7 |
| Q. 3. Explain the prototyping in the software process. | 7 |

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- |  |   |
|--|---|
| Q. 4. Explain the data functional & structural model with example. | 7 |
|--|---|

**Unit - III**

- |  |   |
|--|---|
| Q. 1. What is the need of SCM ?                        | 2 |
| Q. 2. Explain the different design heuristics.         | 7 |
| Q. 3. Explain the version control in context with SCM. | 7 |
| Q. 4. Explain the transform and transaction mapping.   | 7 |

**Unit - IV**

- |  |   |
|--|---|
| Q. 1. What is the difference b/w white box and black box testing ? | 2 |
| Q. 2. Explain the data flow mechanism with example.                | 7 |
| Q. 3. Explain the different types of testing.                      | 7 |

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Q. 4. Write down the different testing strategies and issues. 7

Unit - V

Q. 1. What is the measures and measurements ? 2

Q. 2. Explain the COCOMO model. 7

Q. 3. What is the CASE taxonomy ? 7

Q. 4. Explain about the Delphi model. 7

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**322614 (22)**

BE (6<sup>th</sup> Semester)

Examination, Nov.-Dec., 2011

Branch : CSE

**SOFTWARE ENGINEERING**

Time Allowed : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : • All questions are compulsory.

- Sub question (a) is compulsory, attempt two subparts from b, c & d.

Q. 1. (a) Can we term prototyping as temporary design model ? Justify your answer. 2

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- (b) You have been appointed a project manager within an information systems organization. Your job is to build an application that is quite similar to others so which software process model would you choose and why? 7

- (c) As being software project manager you have got the responsibility to develop a project in record time with accuracy, you are supposed to use reusable components while development so which software process model you would adopt & why? 7

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- (d) Write down norms and steps followed for developing DFD and STD (State Transition Diagram). 7

- Q. 3. (a) What is the difference between data design and architectural design? 2

- (b) Write a note on good design principles of software. 7

- (c) Explain DFD, Structure chart, HIPO diagrams, structured flowchart & pseudo code in context to design. 7

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- (d) Why verification & validation is extremely important in CBS? Justify your answer with suitable example. 7

- Q. 2. (a) What is SRS? Why it's too important for SDLC? 2

- (b) Write a note on software Requirement Analysis activities. 7

- (c) What is difference between Cardinality and Modality? Explain with suitable example & diagram. 7

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- (d) Write a note on: 7

(i) Abstraction,

(ii) Information hiding,

(iii) Modularity,

(iv) Concurrency,

(v) Verification,

(vi) Aesthetics.

- Q. 4. (a) "70% of income is generated from maintenance of software" give your comment on above sentence. 2

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(b) Write a note on effective techniques of coding. 7

(c) Explain black box and glass box testing methods with suitable example. 7

(d) Explain corrective, adaptive, perfective & preventive maintenance by giving detail when they are carried. 7

Q. 5. (a) What are the measures of software complexity? 2

(b) Write a note on software cost estimation technique. 7

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(c) Explain recursive cost estimation technique. 7

(d) Draw and explain the major building blocks of CASE tools. 7

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