



**K-1642**

**M. Sc. (Sem. VII) (I. T.) Examination**  
**October / November – 2012**  
**Software Engineering**

Time : 3 Hours]

[Total Marks : 70

**Instructions :**

(1)

<p>નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  <b>Fillup strictly the details of signs on your answer book.</b></p> <p>Name of the Examination :  <div style="border: 1px solid black; padding: 2px; display: inline-block;"><b>M. SC. (SEM. 7) (I. T.)</b></div></p> <p>Name of the Subject :  <div style="border: 1px solid black; padding: 2px; display: inline-block;"><b>SOFTWARE ENGINEERING</b></div></p> <p>Subject Code No. : <div style="border: 1px solid black; padding: 2px; display: inline-block; width: 20px; text-align: center;">1</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; width: 20px; text-align: center;">6</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; width: 20px; text-align: center;">4</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; width: 20px; text-align: center;">2</div> Section No. (1, 2,...): <div style="border: 1px solid black; padding: 2px; display: inline-block; width: 40px; text-align: center;">Nil</div></p>	<p>Seat No. :  <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <div style="border: 1px solid black; border-radius: 10px; height: 80px; margin-top: 10px; display: flex; align-items: center; justify-content: center;"> <p>Student's Signature</p> </div> </p>
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2. Draw the Figure and give example whenever necessary.

**1 Answer the following questions in short. (Any Six)**

**[18]**

1. Define Size Metric. Explain its advantages and disadvantages.
2. What are the Objectives of SCM Process?
3. What is Aesthetics? Explain link testing.
4. What is PERT? What measures you can do with it?
5. What are formal methods? When and why they required?
6. What is Reactive and Pro-active risk? Which one is good? Explain its advantages.
7. What is baseline? Explain CCB and ECO.

**2 Answer the following questions.(Any Three)**

**[18]**

1. Describe the following: A) Project Status Reporting B) Project Metrics C) Earned Value Analysis (EVA).
2. How Web engineering is different than conventional Software engineering? Explain framework of Web engineering process framework.
3. What is COCOMO-II model? Where is it used? Explain the model along with its computational details.
4. What is the need for metrics? Discuss the direct and indirect measures of software process and product.

**3 1. What are four elements that exist when an effective SCM system is implemented? Discuss each briefly.**

**[6]**

Or

1. Explain algebraic and model-based approach of formal specification.
2. Give UML diagram that uses various use cases and Sequence diagrams for Mobile phone services.

**[12]**

**4 Answer the following questions.**

1. How many persons/month will it take to complete the following project? Assume 6 function points per person/month and Weighting factor 4, 5, 4, 7, 10 respectively.

**[ 8 ]**

External Inputs	18
External outputs	14
External Inquiries	8
External Interfaces	9
Internal Files	6

2. Determine the schedule variance. [4]

Hours Expended =110

% Complete =40

%Project time elapsed =40

Total Hours Budgeted =200

3. Suppose 60 reusable s/w components were planned for a project. Only 70% is to be used and risk probability is 60%. The 1 component =100 LOC and cost/LOC is 16\$ then compute risk exposure. [4]