



JC-1646

M. Sc. (Sem. VII) (I.T.) Examination

March/April – 2013

Software Engineering

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.		Seat No. :
Name of the Examination :		<input type="text"/>
M. SC. (SEM. 7) (I.T.)		<input type="text"/>
Name of the Subject :		<input type="text"/>
SOFTWARE ENGINEERING		<input type="text"/>
Subject Code No. :	<input type="text"/> 1 <input type="text"/> 6 <input type="text"/> 4 <input type="text"/> 6	<div>Student's Signature</div>
Section No. (1, 2,.....) :	Nil	

(2) Draw the figures and give example whenever necessary.

- 1 Answer the following questions in short : (any six) 18
- Define Measure, Metric and Indicator.
 - What are the objectives of SCM process ?
 - Differentiate formal and informal specifications.
 - How is a Gant Chart used for scheduling and monitoring ?
 - What is meant by Cardinality and Modality ?
 - What are CSCI, CCB and ECO ?
 - What is Aesthetics ? Explain Load Testing.
- 2 Answer the following questions : (any three) 18
- Describe the following :
 - Project Status Reporting
 - Project Metrics
 - Earned Value Analysis (EVA)
 - How is 'risk management' performed in a software project ? List any four risks of a s/w project, and the corresponding risk management techniques.
 - What is COCOMO-II model ? Where is it used ? Explain the model along with its computational details.
 - What is the need for metrics ? Discuss the direct and indirect measures of software process and product.

- 3 (i) What are four elements that exist when an effective SCM system is implemented ? Discuss each briefly. 6
- OR**
- (i) Discuss the impact of software reuse on productivity, quality and cost of the project.
- (ii) Give UML diagram that uses various use cases and Class diagrams for travel packages management. 12
- 4 Answer the following questions :
- (i) 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 | 16 |
| External outputs | 12 |
| External Inquiries | 8 |
| External Interfaces | 7 |
| Internal Files | 6 |
- (ii) Determine the schedule variance. 4
- | | |
|------------------------|-------|
| Hours Expended | = 108 |
| % Complete | = 35 |
| % Project time elapsed | = 40 |
| Total Hours Budgeted | = 400 |
- (iii) Use the COCOMO II model to estimate the effort required to build software for a simple ATM that produces 12 screens, 10 reports and will approximately 80 software components. Assume average complexity and average developer maturity. 4
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