



JC-1646

M. Sc. (Sem. VII) (I.T.) Examination
March/April – 2013
Software Engineering

Time : 3 Hours]

[Total Marks : 70]

Instructions :

(1)

નીચે કથાવેલ નિશાનીવાળી ચિગતો ઉત્તરવહી પર અવસ્થા 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.)		
Name of the Subject :		
SOFTWARE ENGINEERING		
Subject Code No. :	1 6 4 6	Section No. (1, 2,.....) : Nil
Student's Signature		

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

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