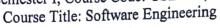
Hajee Mohammad Danesh Science and Technology University, Dinajpur Department of Computer Science and Engineering

B. Sc. in CSE

Semester Final Examination 2017(Jan-Jun)

Level 3 Semester I, Course Code: CSE 301, Credit: 3.0







Time: 3 Hours

[N.B. The figure in the right margin indicates the marks for respective question]

Section-A Answer any THREE

			5
1.	a)	Define Software. Write the characteristics of software.	3
	b)	Explain the term "Software doesn't wear out".	4
	c)	What are the generic process framework activities for developing software?	7
		Explain.	3
	d)	What are the key challenges facing Software Engineering?	2
2.	a)	List three major shortcomings that we might face, if we use the classical waterfall	3
		model for developing all types of software products.	2
	b)	Write short note on Legacy Systems.	3
	c)	Briefly describe the terms Structured Analysis (SA) and Structured Design (SD) in	6
		the context of function-oriented design.	
	d)	Mention five important general skills and traits of a good software engineer.	3
3.	a)	Discuss about various levels of maturity in CMM.	5
	b)	Explain why boundary value analysis is so important for the design of black box test	4
		suite for a problem.	
	c)	Point out the important differences between a Structure chart and a flow chart as	3
		design representation techniques.	
	d)	Suppose an embedded project has 8000 LOC. Determine the Effort, Development	3
		time and Average staff required to develop the software product.	
4.	a)	What does the quality parameter "fitness of purpose" mean in the context of	4
	,	software products? Why is this not a satisfactory criterion for determining the	
		quality of software products?	
	b)	Why is it necessary to detect as many errors as possible during code review and	3
		code inspection stages?	
	c)	Enumerate the different types of Coupling that a module might exhibit.	5
	d)	What are the critical distinctions between a milestone and a deliverable?	3

Section-B Answer any THREE

			3
1,-	a)	Distinguish between a program and a software product.	6
	b)	What do you mean by DFD? Draw a DFD of Online shopping system.	3
	c)	Why is it important to adhere to a life cycle model while developing a large	3
	d)	In computer security terms, explain the differences between an attack and a threat.	4
2.	a)	What does the term "balancing a DFD" mean? Give an example to explain your answer.	
	b)	Without developing an SRS document, an organization might face severe problems. Identify those problems.	4
	c)	Point out three important differences between the function-oriented and the object-	3
		oriented approaches to software design.	4
	d)	What are the most important dimensions of system dependability? Discuss.	4
3.	a)	What is regression testing? Why is regression testing necessary?	3
	b)	Distinguish between software verification and software validation.	3
	c)	Briefly outline the important steps involved in developing a software system using a popular OOD methodology.	5.
	d)	Draw an activity diagram of Airline reservation system.	4
4.	a)	Define the metrics to measure software reliability.	3
	b)	Why is it important for a software development organization to obtain ISO 9001	3.5
		certification?	5
	c)	Define CASE. What are the main advantages of using CASE tools?	5
	d)	What do you mean by the term software reverse engineering?	3.5