

Mid-Term Examination Feb, 2015
School of Computer Engineering, KIIT University

Time: 2 Hours

Full Marks: 50

Answer 6 (Six) questions including Q.1 which is compulsory

1.	(a)	What is the principal aim of Software Engineering?	2 x5
	(b)	What are the objectives of Feasibility study ?	
	(c)	Give two examples of <i>non-functional</i> requirements	
	(d)	How do you understand by the term "Software Crisis"? What are its causes?	
	(e)	How does Feature Point Metric differ from Function Point Metric ?	
2.	(a)	Discuss the circumstances under which the following Software development models would be appropriate (i) Waterfall model (ii) Prototyping model (iii) Incremental Model (iv) Spiral Model	4
	(b)	Suggest a suitable life cycle model for a Software Project where several kinds of risks are there. Justify your answer and explain all phases of the proposed model with schematic diagram.	4
3.	(a)	Discuss how <i>Function Points</i> may be used to estimate the size of software.	4
	(b)	Describe the COCOMO model of software cost estimation.	4
4.	(a)	Discuss the desirable characteristics of a good Software Requirements Specification document.	4
	(b)	Differentiate between (i) <i>functional format</i> and <i>project format</i> for software development organization. (ii) <i>Chief Programmer team</i> and <i>Democratic team</i> for team structure	4
5.	<p>KIIT University is planning to develop a payroll software with the following activities.</p> <p>A list of employees with their basic pay is sent to the Accounts section where an Assistant calculates gross pay including standard allowances which are known for each pay slab.</p> <p>Deduction statements for loan repayment, Income tax etc. are sent to another Assistant to match these deduction-slips with the slips of gross pay and calculate net payment.</p> <p>The net-payment slip is used by the third Assistant to write out pay checks for each employee and send to the respective employees.</p> <p>The total pay bill paid is also computed.</p> <p>Write the functional and non-functional requirements for the above software product.</p>		8
6.	(a)	Briefly describe the emergence of Software Engineering over the years.	4
	(b)	Discuss the responsibilities of a Software Project Manager.	4
7.	Write short notes on <i>any two</i>		4 x2
	(a)	Agile Methodologies	
	(b)	Gantt Charts & Activity Networks	
	(c)	Delphi Technique	
	(d)	Requirement engineering tasks	
	(e)	Disadvantages of estimation of cost of software based on LOC.	