	Utech
Name:	
Roll No.:	To Descript Completing and Completing
Invigilator's Signature :	•••••

CS/MCA/SEM-2/MCA-202/2013

2013

INFORMATION SYSTEMS ANALYSIS AND DESIGN

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

(Multiple Choice Type Questions)

1.	Choose th	ie correct	alterr	ative	s for	r any	ten of	the follo	wing	:
								10 ×	: 1 =	10

- i) In a project, where technical risks are very high, we do not consider model.
 - Spiral a)

b) Waterfall

c) RAD

1.

- d) Incremental.
- ii) Which one is not a step of Requirement engineering?
 - a) Requirement elicitation
 - b) Requirement analysis
 - Requirement design c)
 - d) Requirement documentation.
- iii) In COCOMO model, if project size is typically
 - 2 50 KLOC, then which mode is to be selected?
 - Organic a)
- b) Semidetached
- Embedded c)
- d) None of these.

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				<u> Unean</u>	
iv)	Maximum possible value of reliability is				
	a)	100	b)	10 An Annual (1/ X X X X X X X X X X X X X X X X X X X	
	c)	1	d)	0.	
v)	The is ca	-	to be	e written for unit testing	
	a)	Drivers	b)	Stubs	
	c)	Scaffolding	d)	None of these.	
vi)	Relia erro	·	s de _l	pendent on number of	
	a)	removed	b)	remaining	
	c)	both (a) and (b)	d)	none of these.	
vii)		pling should be for a software.	a	nd cohesion should be	
	a)	high, low	b)	high, high	
	c)	low, high	d)	low, low.	
viii)		asibility study is used ems,	to d	letermine the proposed	
	a)	resource requirements			
	b)	cost and benefits			
	c)	availability of hardware	e and	software	
	d)	all of these.			
ix)		nodifiable model built alled is called a	befor	e the actual system is	
	a)	sample	b)	example	
	c)	template	d)	prototype.	
x)	Project risk factor is considered in				
	a)	spiral model	b)	prototype model	
	c)	evolutionary model	d)	RAD model.	



- xi) Which of the following is able to measure the size of the software without source code?
 - a) FPA

- b) IFM
- c) Cyclomatic complexity d) none of these.
- xii) The primary responsibility of a systems analyst is to
 - a) specify an information system which meets the requirements of an organization
 - b) write programs to meet specifications
 - c) maintain the system
 - d) meet managers of the organization regularly.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

 $3 \times 5 = 15$

- 2. Discuss smoke and regression testing.
- 3. Compare hardware reliability with software reliability.
- 4. a) Why do you try to minimize coupling and maximize cohesion?
 - b) What are the different types of cohesion?

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- 5. a) What do you mean by feasibility study? What are the important activities carried out during the phase of software development?
 - b) What is a throwaway prototype?

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6. What is CASE? Explain the benefits of using CASE tools.

GROUP - C

(Long Answer Type Questions)

Answer any three of the following.

 $3 \times 15 = 45$

7. Describe waterfall model. What are the disadvantages of waterfall model? Compare it with RAD model. 7 + 4 + 4

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- 8. What is software failure? How is it related with a fault? Explain the significance of bath tub curve of reliability with the help of a diagram. What do you mean by software quality standard? 2 + 3 + 5 + 5
- 9. A shop owner allows credit facility to his customers if they satisfy one of the following conditions :
 - i) Holding present job for more than 3 years and residing in the same place for more than 5 years.
 - ii) Monthly salary exceeds 1500 and holding present job for more than 3 years
 - iii) Monthly salary exceeds 1500 and residing in the same place for more than 5 years.
 - The facility is rejected for all other customers.
 - a) Draw a Decision Table and Decision Tree for the above problem. 4 + 4
 - b) Write down the Structure English and Flow chart for the above problem. 4 + 3
- 10. a) What is DFD? Discuss shortcomings in DFD.
 - b) Differentiate between Logical DFD and Physical DFD.
 - c) Draw a physical DFD for a Library Management system of any institute.
 - d) Describe Software verification and Software validation.

5 + 2 + 5 + 3

11. Write short notes any three of the following:

 3×5

- a) COCOMO
- b) Prototyping
- c) Generalization and Specialization
- d) UML.

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