	Utech
Name:	
Roll No.:	The Dear of Exercising and Explana
Invigilator's Signature :	

2013

INFORMATION SYSTEM ANALYSIS & 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 the correct alternatives for the following:

 $10 \times 1 = 10$

- i) SRS stands for
 - a) Software Requirement Specification
 - b) Software Requirement Solutions
 - c) System Requirement Specification
 - d) None of these.
- ii) Waterfall Model is not suitable for
 - a) Small Projects
 - b) Accomodating Changes
 - c) Complex projects
 - d) None of these.

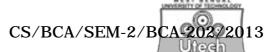
2053 [Turn over





- a) Rapid Application Development
- b) Relative Application Development
- c) Ready Application Development
- d) Repeated Application Development.
- iv) If requirements are easily understandable and defined, which model is to be selected?
 - a) Waterfall Model
 - b) Prototyping Model
 - c) Spiral Model
 - d) None of these.
- v) If user participation is available, which model is to be chosen?
 - a) Waterfall Model
 - b) Iterative Enhancement Model
 - c) Spiral Model
 - d) RAD Model.

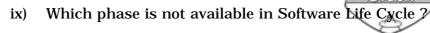
2053 2



- vi) Which Model is most popular for student's small projects?
 - a) Waterfall Model
 - b) Spiral Model
 - c) Quick and fix Model
 - d) Prototyping Model.
- vii) Project Risk Factor is considered in
 - a) Waterfall Model
 - b) Spiral Model
 - c) Quick and fix Model
 - d) Prototyping Model.

viii) SDLC has

- a) 8 phases
- b) 9 phases
- c) 10 phases
- d) none of these.



- a) Coding
- b) Testing
- c) Maintenance
- d) Abstraction.
- x) Statistically, the maximum percentage of errors belong which of the following phases of SDLC ?
 - a) Coding
 - b) Design
 - c) Specifications
 - d) Installation and Maintenance.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

 $3 \times 5 = 15$

- 2. What is System Analysis ? What are the roles of the system analyst ? 2 + 3
- 3. Write the advantages and disadvantages of prototype model.
- 4. What do you mean by clean decomposition & neat arrangement in modular design approach?
- 5. What is black box testing ? How does it differ from white box testing ? 3 + 2
- 6. What is normalization? Why do we need it? 2 + 3

2053 4



GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. 3×15

- $3 \times 15 = 45$
- 7. a) What is DFD? Discuss different symbols used in DFD.
 - b) Differentiate between Logical DFD & Physical DFD.
 - c) Draw the E-R diagram showing the cardinality for the following problem :

A store has different counters managed by different employees. A counter has different items but no two counters have common items. Customer buys from different counters. Bills are prepared from bill counter only.

d) Explain deneralization and Specialization.

$$3 + 2 + 6 + 4$$

- 8. a) Draw and explain waterfall model.
 - b) How is risk handled in spiral model?
 - c) Explain COCOMO.
 - d) Assume that the size of an organic type software product has been estimated to 40,000 lines of source code. Determine effort and time of development of the product. 5 + 2 + 4 + 4



- 9. a) Explain Risk management.
 - b) Write a short note on data dictionary.
 - c) Differentiate between white box and black box testing.
 - d) Justify the importance of debugging. 5 + 3 + 4 + 3
- 10. a) Distinguish between Software verification and Software validation.
 - b) The discount policy has following conditions for the customers. If orders for 6 or more copies per book title.

If customer is from 'Libraries and individual':

5% allowed on order of 6 - 19 copies per book title

10% on orders for 20 copies per book title and

15% on orders for 50 copies per book title.

Develop a process description in —

- i) Structured English
- ii) Decision Table
- iii) Decision Tree.

$$6 + (3 + 3 + 3)$$

2053



11. Write short note on any three of the following:

- a) WBS
- b) System testing
- c) Decision table & decision tree
- d) UML diagram
- e) Cohesion and coupling.

2053 7 [Turn over