



Name :
Roll No. :
Invigilator's Signature :

CS/MBA/SEM-3(FT) & 5(PT)/SM-302 /2012-13

2012

SYSTEM 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 the correct alternatives for the following : $10 \times 1 = 10$
 - i) Which one of the following is not concerned with the feasibility study of a proposed system ?
 - a) Identifying the costs and benefits
 - b) Identifying the technical feasibility
 - c) Defining the software architecture and algorithms
 - d) How the system will fit in the current operations.
 - ii) Cost benefit analysis
 - a) estimates the cost of hardware and software
 - b) evaluates the tangible and intangible factors
 - c) compares the cost with the benefit of introducing a computer based system
 - d) all of these.



- iii) The scope of a design must be
 - a) bounded
 - b) unbounded
 - c) not relevant for design
 - d) depends on the system.
- iv) Which one is not a software life cycle model ?
 - a) Evolutionary model b) Iterative model
 - c) COCOMO model d) Spiral model.
- v) A prototype
 - a) is a working system which will be changed through several iterations
 - b) helps to crystallize essential design requirements
 - c) will produce preliminary information on the workability of a concept
 - d) all of these.
- vi) A decision table consists of
 - a) condition and result b) pros and cons
 - c) stub and entry d) all of these.
- vii) Loss of data integrity implies that data is
 - a) not suitable for running in an integrated environment
 - b) inconsistent
 - c) outdated
 - d) repeated.
- viii) Audit trail is
 - a) audit around the computer
 - b) audit through the computer
 - c) audit with the computer
 - d) all of these.



- ix) UML stands for
- a) Unified Modeling Language
 - b) Unified Modular Language
 - c) Unique Modeling Language
 - d) Unique Modular Language.
- x) Actor is a component of
- a) collaboration diagram b) component diagram
 - c) data flow diagram d) use case diagram.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following $3 \times 5 = 15$

- 2. Explain the role and responsibilities of a system analyst.
- 3. What do you understand by 'business process re-engineering' ?
- 4. What do you mean by cohesion and coupling in the context of software design ?
- 5. Distinguish between black box testing and white box testing.
- 6. What are the different types of maintenance ?

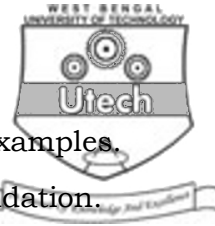
GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. a) Describe the various phases of SDLC.
b) What are the merits and demerits of waterfall model ?
 $10 + (3 + 2)$
- 8. a) What is prototype ? Draw a schematic diagram of prototyping model of software development.
b) What is spiral model ? What are the four main phases in spiral model ? Why is spiral model called meta model ?
 $(2 + 4) + 2 + 4 + 3$

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9. a) What is data dictionary ? Explain with examples.
b) Distinguish between verification and validation.
c) Discuss in detail bottom-up and top-down design approaches. (2 + 3) + (2 + 2) + (3 + 3)
10. Write short notes on any *three* of the following : 3 × 5
- a) Feasibility study
 - b) Cost-benefit analysis
 - c) Decision tree and decision table
 - d) ISO standards
 - e) CASE Tools.

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