



Name :

Roll No. :

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.*

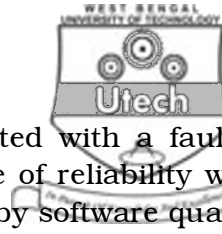
GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :
 $10 \times 1 = 10$
 - i) In a project, where technical risks are very high, we do not consider model.
 - a) Spiral
 - b) Waterfall
 - c) RAD
 - d) Incremental.
 - ii) Which one is not a step of Requirement engineering ?
 - a) Requirement elicitation
 - b) Requirement analysis
 - c) Requirement design
 - d) Requirement documentation.
 - iii) In COCOMO model, if project size is typically 2 – 50 KLOC, then which mode is to be selected ?
 - a) Organic
 - b) Semidetached
 - c) Embedded
 - d) None of these.



- iv) Maximum possible value of reliability is
 - a) 100
 - b) 10
 - c) 1
 - d) 0 .
- v) The overhead code required to be written for unit testing is called
 - a) Drivers
 - b) Stubs
 - c) Scaffolding
 - d) None of these.
- vi) Reliability of a software is dependent on number of errors
 - a) removed
 - b) remaining
 - c) both (a) and (b)
 - d) none of these.
- vii) Coupling should be and cohesion should be for a software.
 - a) high, low
 - b) high, high
 - c) low, high
 - d) low, low.
- viii) A feasibility study is used to determine the proposed systems,
 - a) resource requirements
 - b) cost and benefits
 - c) availability of hardware and software
 - d) all of these.
- ix) A modifiable model built before the actual system is installed is called a
 - 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.



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.

