CS/MCA/Even/Sem-2nd/MCA-202/2015

WEST BENGAL UNIVERSITY OF TECHNOLOGY

MCA-202

INFORMATION SYSTEMS ANALYSIS & DESIGN

Time Allotted: 3 Hours   Full Marks: 70

The questions are of equal value.
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.   Answer *all* questions.   10×1 = 10

(i) In _____ one module of the new information system is activated at a time.

(A) System Development Life Cycle

(B) CASE tool

(C) Phased Conversion

(D) None of the above

(ii) The primary tool used in structured design is a

(A) structured chart   (B) data-flow diagram

(C) program flowchart   (D) none of the above

(iii) Systems analyst should use software tools in their work as

(A) all analysts use them

(B) they assist in systematic design of systems

(C) they are inexpensive

(D) they are easily available

2054   1   **Turn Over**

(iv) The primary objective of system design is to

(A) design the programs, databases and test plan

(B) design only user interfaces

(C) implement the system

(D) find out how the system will perform

(v) Feasibility study is carried out by

(A) managers of the organization

(B) system analyst in consultation with managers of the organization

(C) users of the proposed system

(D) systems designers in consultation with the prospective users of the system

(vi) Requirement specification is carried out

(A) after requirements are determined

(B) before requirements are determined

(C) simultaneously with requirements determination

(D) independent of requirements determination

(vii) How many steps are in the Systems Development Life Cycle (SDLC)?

(A) 4   (B) 5   (C) 6   (D) 10

(viii) Enhancements, upgrades, and bug fixes are done during the _____ step in the SDLC.

(A) maintenance and evaluation

(B) problem/ opportunity identification

(C) design

(D) development and documentation

(ix) In a DFD, external entities are represented by a

(A) rectangle   (B) ellipse

(C) diamond shaped box   (D) circle

(x) The Data Flow Diagram is the basic component of _____ system

(A) conceptual   (B) logical

(C) physical   (D) none of the above

GROUP B
(Short Answer Type Questions)

Answer any *three* questions.   3×5 = 15

2. What is the full form of SRS? What are the characteristics of a good SRS?   1+4

3. Discuss briefly the different stages of SDLC in brief.   5

4. Explain different types of coupling.   5

5. Differentiate between logic design and physical design of a system with example.   5

6. What do you mean by feasibility study? What are the important activities that are carried out in the study? Discuss.   3+2

GROUP C
(Long Answer Type Questions)

Answer any *three* questions.   3×15 = 45

7. (a) Draw the DFD of a Railway Reservation System with requirement specification details.   8

(b) What is system? What are desirable characteristics of a system?   1+4

(c) What do you mean by Balancing of DFD?   2

8. (a) What do you mean by Cohesion and Coupling? Describe different type of cohesion with example.   10

(b) What is Modular approach of system development?   3

(c) What is the necessity of prototyping?   2

9. (a) Below is a table of 5 tasks, their precedence requirements, and time taken to complete them.   9

Task	Predecessors Task (Dependencies)	Time (Days)
A	-	10
B	A	16
C	B	17
D	C	25
E	D	15

Draw the Network diagram for the above problem.

(b) Discuss any two White-Box testing techniques.   6

10. (a) Construct an E-R diagram for Banking System. Make the necessary assumption to construct it.   9

(b) Construct appropriate tables for the E-R diagrams.   6

11. Write short notes on any *three* of the following: 3×5
(a) Iterative Waterfall Model
(b) Decision Tree
(c) CASE TOOLS
(d) ISO