

**INFORMATION SYSTEM ANALYSIS DESIGN AND IMPLEMENTATION  
(MCAP 1204)**

**Time Allotted : 3 hrs**

**Full Marks : 70**

*Figures out of the right margin indicate full marks.*

*Candidates are required to answer Group A and  
any 5 (five) from Group B to E, taking at least one from each group.*

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

**Group - A  
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) \_\_\_\_\_ is an important factor of management information system.  
(a) System (b) Data  
(c) Process (d) All
- (ii) \_\_\_\_\_ can be defined as data that has been processed into a form that is meaningful to the recipient and is of real or perceive value in current or prospective decisions.  
(a) System (b) Information  
(c) Technology (d) Service
- (iii) A data flow can  
(a) Only emanate from an external entity  
(b) Only terminate in an external entity  
(c) May emanate and terminate in an external entity  
(d) May either emanate or terminate in an external entity but not both
- (iv) A \_\_\_\_\_ is an outline of a process that keeps develop successful information systems  
(a) System Development Life Cycle (b) CASE tool  
(c) Phased Conversion (d) Success Factors
- (v) In \_\_\_\_\_ system the interaction between various subsystems cannot be defined with certainty  
(a) Open System (b) Closed System  
(c) Deterministic System (d) Probabilistic System
- (vi) Data cannot flow between two data stores because  
(a) It is not allowed in DFD  
(b) A data store is a passive repository of data  
(c) Data can get corrupted  
(d) they will get merged

- (vii) \_\_\_\_\_ is a tabular method for describing the logic of the decisions to be taken.
- |                     |                   |
|---------------------|-------------------|
| (a) Decision tables | (b) Decision tree |
| (c) Decision Method | (d) Decision Data |
- (viii) An entity set that does not have sufficient attributes to form a primary key is termed a
- |                       |                  |
|-----------------------|------------------|
| (a) Strong entity set | (b) Variant set  |
| (c) Weak entity set   | (d) Variable set |
- (ix) PERT means
- |   |
|---|
| (a) Project Estimation and Review Technique |
| (b) People Evaluation and Review Technique  |
| (c) Program Evaluation and Review Technique |
| (d) Product Evaluation and Review Technique |
- (x) Which of the following term describes testing?
- |                             |   |
|-----------------------------|---|
| (a) Finding broken code     | (b) Evaluating deliverable to find errors |
| (c) A stage of all projects | (d) None of the mentioned                 |

### **Group - B**

2. (a) What is system? Describe its characteristics.  
(b) Explain different types of information system with example.
- 5 + 7 = 12**
3. (a) What is meant by system analysis? What are the roles of a system analyst?  
(b) What is meant by requirement analysis? Why does requirements analysis never really end for project?
- (3 + 3) + 6 = 12**

### **Group - C**

4. (a) Consider the development of an Employee Management System for an organization. The system is aimed at automating the complete employee details, including maintenance of employee attendance records, leave details, and printing monthly pay slips. This system is also expected to sum up each employee's work hours, time off, shift pays that help to generate the pay slip of employees. Draw the 0 level, 1<sup>st</sup> Level and 2<sup>nd</sup> Level DFD for developing this system.  
(b) What is synchronous and asynchronous operation of two processes?
- 10 + 2 = 12**
5. (a) What is cost/benefit analysis? Explain the different procedure of cost/benefit analysis.

(b) Explain the difference between physical and logical DFD with example.

**8 + 4 = 12**

**Group - D**

6. (a) A university maintains data about following entities with attributes:  
(i) Course: Number, Title, Credits, syllabus and prerequisites  
(ii) Course offered: Course number, year, semester, instructor, timings and classroom.  
(iii) Student: Student-id, name and degree program.  
(iv) Instructor: Identification number, name, department and title.  
The enrolment of student in courses and grades awarded to students in each course must be appropriately recorded. Construct an E-R diagram for the university using standard notation.

(b) List and illustrate the primary uses and elements of a decision table.

**8 + 4 = 12**

7. (a) If the customer buys \$500 or more worth of merchandise, delivery is free. If the customer buys between \$100 and \$500 worth of merchandise, then the delivery charge is \$10, unless s/he is a valued customer. In this case, the delivery charge is \$5 unless if the customer pays by cash in which case the delivery is free. If the customer buys under \$100 worth of goods, the delivery charge is \$10, unless the customer pays cash, in which case the delivery charge is \$5  
(i) Design the complete decision table for this process.  
(ii) Reduce your decision table where necessary and design the simplified version.  
(iii) Draw this table as an Extended Entry table

(b) What are different types of forms used in an organization? Discuss in detail with example

**9 + 3 = 12**

**Group - E**

8. (a) Explain the differences between implementation and maintenance?

(b) Explain the different type of maintenance.

**4 + 8 = 12**

9. (a) What is audit trail? Explain by giving examples.

(b) Why should a system analyst include audit controls in a system?

(c) Why is training important for users before implementation?

**4 + 4 + 4 = 12**

Department & Section	Submission Link
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