

**2021**

*Time : 3 hours*

*Full Marks : 70*

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

*The figures in the margin indicate full marks.*

*Answer from all the Groups as directed.*

**Group – A**

**(Objective Type Questions)**

1. [A] Select the most suitable answer of the following : 1×5 = 5
  - (a) The Data Flow Diagram (DFD) shows :
    - (i) The flow of Data
    - (ii) The Process
    - (iii) The areas where they are stored
    - ~~(iv) All of these~~
  - (b) The system have been classified in different ways :
    - (i) Physical or Abstract

- (ii) Open or Closed
  - (iii) Man-made Information System
  - ☒ (iv) All of these
- (c) The primary tool used in structured design is a :
- ☒ (i) Structure chart
  - (ii) Data flow diagram
  - (iii) Program flowchart
  - (iv) Module
- (d) The symbol is used in a flowchart to represent a step that gets information from user :
- ☒ (i) Input / output
  - (ii) Process
  - (iii) Selection
  - (iv) None of these
- (e) An open rectangle :
- (i) Define a source or destination of a system data
  - (ii) Identifies the Data Flow
  - (iii) Represent a process that transform incoming data flow into outgoing data flow
  - ☒ (iv) Is a data store-data at rest or temporary repository of data

[B] Fill in the blanks of the following :  $1 \times 5 = 5$

- (f) In DFD external entities are represented by a circle.
- (g) The DFD is a basic component of SI system.
- (h) HIPO stands for \_\_\_\_\_.
- (i) \_\_\_\_\_ is a tabular method for describing the logic of decisions to be taken.
- (j) Decision Tree uses \_\_\_\_\_.

### Group – B

#### (Short-answer Type Questions)

2. Answer any four questions of the following :

$5 \times 4 = 20$

- (a) What is SSAD ? Explain the characteristics of the system.
- ☒ (b) Explain the elements of the system.
- ☒ (c) Explain the Data Dictionary and its organization.
- ☒ (d) Differentiate between Decision Tree and Decision Table with suitable example.
- ☒ (e) What is feasibility study ? Explain the types of feasibility study in SSAD.
- (f) What is Normalization ? Explain the Normalized and Un-normalized data.

## Group – C

### (Long-answer Type Questions)

Answer any four questions of the following :

10×4 = 40

3. ✓ (a) What is System Development Life Cycle ?  
Explain, in details, about System Development Life Cycle (SDLC).
- ✓ (b) Explain the role and responsibilities of System Analyst in System Development.
- (c) Differentiate between 1NF and 2NF with suitable examples.
- (d) Explain the DSS and MIS.
- (e) Construct an Entity-relationship diagram for Airlines Reservation System.
- ✓ (f) Differentiate between Physical DFD and Logical DFD.
- ✓ (g) Explain the following :  
(i) System Design  
(ii) Context Diagram  
(iii) Structured English

