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Ans to the Ques. No - 01

(1)

System Design - refers to the process of defining, describing, and specifying the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements.

System design plays a crucial role in ensuring that a system is reliable, scalable, maintainable, and able to meet the needs of its users.

Difference Between System Analysis and System Design :-

System Analysis

System Design

(1) System Analysis is the examination of the problem.

(1) System Design is the creation of information system which is solution to the problem program.

(2) It is concerned with elucidation of the specification detailed

(2) It concerned with identifying all contains

### System Analysis

③ It deals with data collection and a datelined evaluation of existing file.

④ In system analysis part the main focus on Data flow diagram and data dictionary.

⑤ The system analysis is the problem-solving methodology that uses the system orientation to define the problem and to develop the necessary solutions.

### System Design

③ It deals with general design specification detailed design specification I/O files and prog procedures.

④ It also deals with Program construction testing and users acceptance.

⑤ System design is the process of collecting and interpreting facts, identifying the problem and decomposition of a system into its components.

(3)

## Ans to the Ques. No-02

A system is a collection can have different meanings depending on the context. In general, a system refers to a set of connected components or elements that work together to achieve a common goal or purpose. It can be a complex arrangement of parts that interact with each other, such as a computer system.

There are various types of systems, which can be classified based on different criteria.

Here are a few common types:

- ① Physical system
- ② open or closed systems
- ③ Deterministic or probabilistic system
- ④ Man-made information system.

The major information systems are:

- ☒ formal information systems
- ☒ Computer based information systems.



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The systems model is a process-oriented representation that emphasizes the influences, or flow, of information between modules.

The steps to systems modelling -

① identify the system of interest, in particular specify the boundary and specify the level of detail in which you.

Ans to the Ques. No-03  
There are four basic elements of a data flow diagram - processes, data stores, external entities and data flows.

Data Flow Diagram (DFD) is a graphical representation of data flow in any system. It is capable of illustrating incoming data flow, outgoing data flow and store data. Data flow diagram describes anything about how data flows through the system.

Types of DFD:

DFD is of two types:

Data Flow Diagram

Logical DFD

Physical DFD

① Logical DFD - Flow diagram mainly focuses on the system process. It illustrates how data flows in the system. Logical DFD is used in various organizations for the smooth running of system.

② Physical DFD - Flow diagram show how the data flow is actually implemented in the system.

Physical DFD is more specific and close to implementation.

Components of Data Flow diagram -

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination.

Based on which target services subscribe to a particular source, you get a one-to-one, a one of many.

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Ans to the Ques. No-04

There are advantages and disadvantages to both approaches. Bottom-up budgeting often results in a more accurate budget, but it also requires significantly more time and resources to complete.

Bottom-up budgeting is a type of budgetary system in which budgets are created from the bottom up rather than from the top down. In other words, bottom-up budgeting starts with individual expenses and then aggregates them into department-level budgets.

The general process of bottom-up budgeting starts with individual expenses to arrive at a total departmental budget amount which can then be aggregated into the overall budget for the entire organization.

Identifying individual components: -

The first step is to identify all of a business's individual components and any projects



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on initiatives that need to be funded.

Each of these projects must be analyzed individually at a relatively granular level in order to create an accurate accounting for their costs.

There is a need for one or two group leaders in intance. Better team morale - greater buy-in from team members because everyone is given the equal opportunity to influence decision and project outcomes regardless of seniority.

A bottom-up approach helps improve employee collaboration as everyone is involved in the decision-making process and has input into how things are done.

Application of structured flowcharts -

This preference stems from the fact that flow charts enable easier comprehension and generate fewer errors in human perception. The structured flowchart helps the mission to create new algorithms by encapsulating a range of

data points inside can interlinked illustration.

A structured flowchart is one in which all of the processes and decisions must fit into one of a few basic structured elements.