2020 7a) What makes up a system performance definition? Explain the steps to prepare the definition with example situation

Q. Describe three steps of system performance definition.

Ans: The system performance definition involves three steps: 2018 7a

1. Statement of constraints.
2. Identification of specific system objectives.
3. Description of outputs.

Statement of constraints: Constraints are factors that limit the solution of the problem. Some constraints are identified during the initial investigation and are discussed with the user. There are general constraints that might have a bearing on the required performance of a candidate system.

Identification of specific system objectives: Once the constraints are spelled out, the analyst proceeds to identify the systems specific performance objectives. They are derived from the general objectives specified in the project directive at the end of the initial investigation. The steps are to state the system's benefits and then translate them into measurable objectives.

Description of outputs: A final step in system performance definition is describing the outputs required by the user. An actual sketch of the format and contents of the reports as well as a specification of the media used, their frequency, and the size and number of copies required are prepared at this point.

Q. What do you mean by feasibility study? What considerations are involved in feasibility analysis? 2016 7a 4.75

Ans: Feasibility study: Feasibility studies are disillusioning for both users and analysts. First, the study often presupposes that when the feasibility document is being prepared the analyst is in a position to evaluate solutions. Second, most studies tend to overlook the confusion inherent in system development – the constraints and the assumed attitudes. If the feasibility study is to serve as a decision document, it must answer three key questions:

assume

1. Is there a new and better way to do the job that will benefit the user?
2. What are the costs and savings of the alternatives?
3. What is recommended?

2020 6b what considerations are involved in feasibility analysis? which consideration do you think is most crucial?

Feasibility considerations: Three key considerations are involved in the feasibility analysis:

1. **Economic feasibility:** Economic analysis is the most frequently used method for evaluating the effectiveness of a candidate system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system. Otherwise, further justification or alternations in the proposed system will have to be made if it is to have a chance of being approved.
2. **Technical feasibility:** Technical feasibility centers on the existing computer system and to what extent it can support the proposed addition. For example, if the current computer is operating at 80 percent capacity – an arbitrary ceiling – then running another application could overload the system or require additional hardware. This involves financial considerations to accommodate technical enhancements. If the budget is a serious constraint, then the project is judged not feasible.
3. **Behavioral feasibility:** People are inherently resistant to change and computers have been known to facilitate change. An estimate should be made of how strong a reaction the user staff is likely to have toward the development of a computerized system. It is common knowledge that computer installations have something to do with turnover, transfers, retraining and changes in employee job status. Therefore, it is understandable that the introduction of a candidate system requires special effort to educate, sell, and train the staff on new ways of conducting business.

2014 6b- discuss the steps involved in feasibility analysis

2019 8a

Q. Elaborate on the steps in feasibility analysis. If you were to shorten them to four steps, which ones would you pick? Why? 2016 7b

Ans: Steps in feasibility analysis: Feasibility analysis involves eight steps:

1. Form a project team and appoint a project leader.
2. Prepare system flowcharts.
3. Enumerate potential candidate systems.
4. Describe and identify characteristics of candidate systems.
5. Determine and evaluate performance and cost effectiveness of each candidate system.
6. Weight system performance and cost data.
7. Select the best candidate system.
8. Prepare and report final project directive to management.

Form a project team and appoint a project leader: Project are planned to occupy a specific time period, ranging from several weeks to months. The senior systems analyst is generally appointed as project leader. He/she is usually the most experienced analyst in the team. The appointment is temporary, lasting as long as the project. Regular meetings take place to keep up the momentum and accomplish the mission – selection of the best candidate system. A record is kept of the progress made in each meeting.

Prepare system flowcharts: The next step in the feasibility study is to prepare generalized system flowcharts for the system. Information – oriented charts and data flow diagrams prepared in the initial investigation are also reviewed at this time. The charts bring up the importance of inputs, outputs and data flow among key points in the existing system.

Enumerate potential candidate systems: This step identifies the candidate systems that are capable of producing the outputs included in the generalized flowcharts. This requires a transformation from logical to physical system models. Another aspect of this step is consideration of the hardware that can handle the total system requirements.

Describe and identify characteristics of candidate systems: From the candidate systems considered, the team begins a preliminary evaluation in an attempt to reduce them to a manageable number. Technical knowledge and expertise in the hardware/software area are critical for determining what each candidate system can and cannot do.

Determine and evaluate performance and cost effectiveness of each candidate system: The cost encompasses both designing and installing the system. It includes user training, updating and physical facilities and documenting. System performance criteria are evaluated against the cost of each system to determine which system is likely to be the most cost effective and also meets the performance requirements. The safe deposit problem is easy. The analyst can plot performance criteria and costs for each system to determine how each fare.

Weight system performance and cost data: The performance and cost data for each candidate system show which system is the best choice. This outcome terminates the feasibility study. Many times however, the situation is not so clear-cut. The performance/ cost evaluation matrix does not clearly identify the best system, so the next step is to weight the importance of each criterion by applying a rating figure. Then the candidate system with the highest total score is selected.

Select the best candidate system: The system with the highest total score is judged the best system. This assumes the weighting factors are fair and the rating of each evaluation criterion is accurate.

Prepare and report final project directive to management: The report is a formal document for management use, brief enough and sufficiently nontechnical to be understandable, yet detailed enough to provide the basis for system design.

Q. What makes up a feasibility report?

Ans: The report contains the following sections:

- Cover letter formally presents the report and briefly indicates to management the nature, general findings and recommendations to be considered.

2020 6c) Discuss the method of "Weight system performance and cost data" with proper example - 4.75

2018 7b

- Table of contents specifies the location of the various parts of the report management quickly refers to the sections that concern them.
- Overview is a narrative explanation of the purpose and scope of the project, the reason for undertaking the feasibility study and the department involved or affected by the candidate system.
- Detailed findings outline the methods used in the present system.
- Economic justification details point – by – point cost comparisons and preliminary cost estimates for the development and operation of the candidate system.
- Recommendations and conclusions suggest to management the most beneficial and cost effective system.
- Appendixes document all memos and data compiled during the investigation.

The End