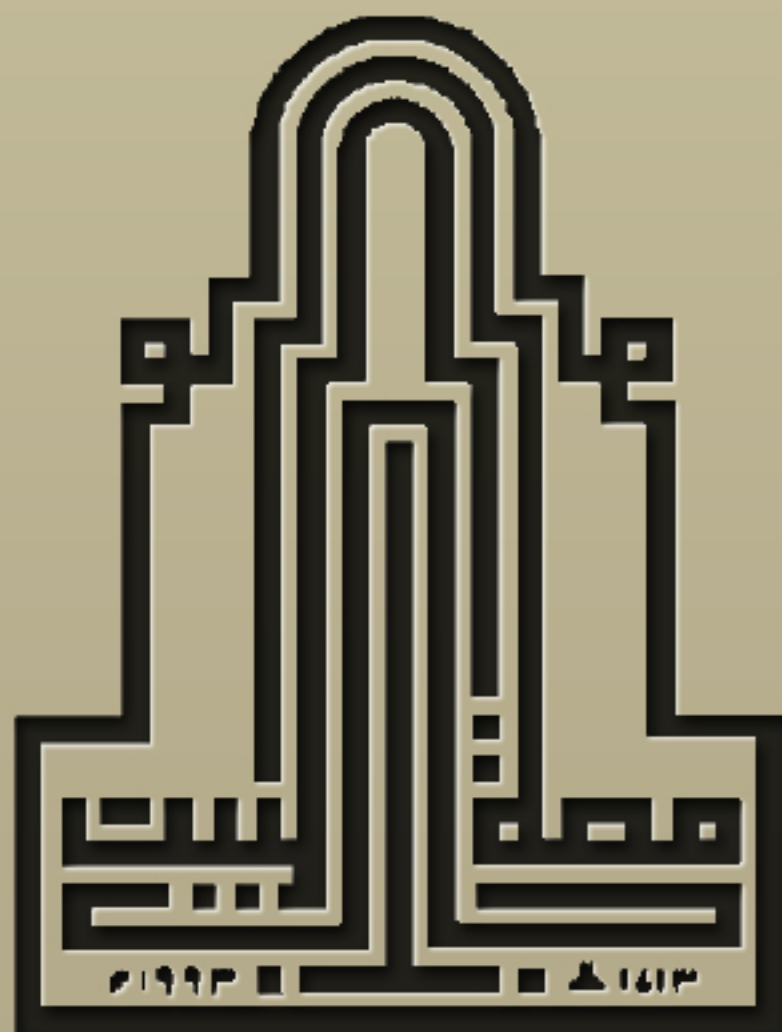


مكتبة

” خذُ وأعطي ”
الإلكترونية

جامعة آل البيت " كلية الإقتصاد "

مجموعة طلابية تسعى لتوفير كل ما يلزم طلاب
كلية إدارة المال والاعمال من مواد وشرحات واسئلة بصورة الكترونية



CH 3

MULTIPLE CHOICE

1. The narratives, diagrams, charts, and other written materials that explain how a system works are collectively called
 - a) documentation.
 - b) data flows.
 - c) flowcharts.
 - d) schema.

2. One popular means of documenting a system is to develop diagrams, flowcharts, tables, and other graphical representations of information. These are often supplemented by
 - a) product specifications.
 - b) narrative descriptions.
 - c) logic charts.
 - d) oral descriptions from management.

3. The graphic description of the flow of data within an organization is called a
 - a) systems flowchart.
 - b) data flow diagram.
 - c) context diagram.
 - d) document flowchart.

4. A graphical representation of the flow of documents and information between departments or areas of responsibility within an organization is called
 - a) a data flow diagram.
 - b) a document flowchart.
 - c) a system flowchart.
 - d) a program flowchart.

5. A graphical representation of the relationship among the input, processing and output in an information system is called
 - a) a data flow diagram.
 - b) a document flowchart.
 - c) a system flowchart.
 - d) a program flowchart.

6. A graphical description of the sequence of logical operations that a computer performs is called
 - a) a data flow diagram.
 - b) a document flowchart.
 - c) a system flowchart.
 - d) a program flowchart.

7. SAS No. 94 requires that independent auditors be able to
 - a) draw computerized flowcharts.
 - b) prepare flowcharts and decision tables before conducting an audit.
 - c) understand a client's system of internal controls before conducting an audit.
 - d) prepare and understand any type of system documentation.

8. The passage of the Sarbanes Oxley Act
- Made documentation skills even more important.
 - Requires public companies to prepare an annual internal control report.
 - Means that auditors must be able to prepare, evaluate and read documentation tools such as flowcharts.
 - All of the above.
9. Which of the following is not a true statement?
- Documentation tools save an organization both time and money.
 - Documentation tools are used extensively in the systems development process.
 - Data flow diagrams and flowcharts are the two most frequently used systems development documentation tools.
 - Data flow diagrams and flowcharts are difficult to prepare and revise using software packages.
10. A data flow diagram
- is a graphical description of the source and destination of data that shows how data flow within an organization.
 - is a graphical description of the flow of documents and information between departments or areas of responsibility.
 - is a graphical description of the relationship among the input, processing, and output in an information system.
 - is a graphical description of the sequence of logical operations that a computer performs as it executes a program.
11. In a DFD, a square box represents
- data sources and destinations.
 - data flows.
 - transformation processes.
 - data stores.
12. In a DFD, a "data sink" is also known as
- data stores.
 - transformation processes.
 - data flows.
 - data destinations.
13. In a DFD, an arrow represents
- data sources and destinations.
 - the direction of data flows.
 - transformation processes.
 - data stores.
14. In a DFD, a circle represents
- data sources and destinations.
 - the direction of data flows.
 - transformation processes.
 - data stores.

15. In preparing a DFD, when data are transformed through a process, the symbol used should be
- a) a circle.
 - b) an arrow.
 - c) a square.
 - d) two horizontal lines.
16. In a DFD, lines that are horizontal and parallel to each other represent
- a) data sources and destinations.
 - b) data flows.
 - c) transformation processes.
 - d) data stores.
17. In a DFD, a "bubble" is also known as
- a) data stores.
 - b) transformation processes.
 - c) data flows.
 - d) data destinations.
18. An entity that sends or receives data used or produced by the system is called a
- a) data source or destination.
 - b) data store.
 - c) data flow.
 - d) data transformation.
19. A data flow diagram (or DFD) has four basic elements. The flow of data between processes, data stores, and data sources and destinations is known as
- a) data sources and destinations.
 - b) data flows.
 - c) transformation processes.
 - d) data stores.
20. A data flow diagram (or DFD) has four basic elements. The altering of data from inputs to outputs is known as
- a) data sources and destinations.
 - b) data flows.
 - c) transformation processes.
 - d) data stores.
21. A data flow diagram (or DFD) has four basic elements. The people and organizations that send data to and receive data from the system are known as
- a) data sources and destinations.
 - b) data flows.
 - c) transformation processes.
 - d) data stores.
22. In general, a data destination will be shown by
- a) an arrow pointing away.
 - b) an arrow pointing in.

- c) arrows pointing both ways.
d) no arrows, only two horizontal lines.
23. In the data flow diagram of the customer payment process, "update receivables" will appear in
- a) a square.
b) a circle.
c) two horizontal lines.
d) none of the above
24. In the data flow diagram of the customer payment process, "Customer" will appear in
- a) a square.
b) a circle.
c) two horizontal lines.
d) none of the above
25. In the data flow diagram of the customer payment process, "Customer payment" will appear above or in
- a) a square.
b) a circle.
c) two horizontal lines.
d) an arrow.
26. Most processes on a DFD can be identified by
- a) data in-flows only.
b) data out-flows only.
c) data flows both into or out of a process.
d) always being followed by a data store.
27. Data flows between two symbols on a DFD have more than one data item. More than one arrow is needed if
- a) data elements always flow together.
b) data elements flow at different times.
c) data elements flow to different locations.
d) there is no guideline on use of single or multiple arrows.
28. The transformation of data in a DFD is represented as a
- a) process.
b) data dictionary.
c) data stores.
d) data source and destination.
29. The storage of data on a DFD is shown by
- a) circles.
b) arrows.
c) squares.
d) two horizontal lines.

30. Creating a DFD is an iterative process. Each DFD iteration helps the designer to refine the diagram and identify the fine points. A DFD created at a high-level or summary view is referred to as a
- data process diagram.
 - data dictionary diagram.
 - content diagram.
 - context diagram.
31. In creating DFDs, a context diagram
- Includes major transformation processes.
 - Depicts systems boundaries.
 - Is not necessary.
 - Is very detailed.
32. In a payroll processing DFD, the "prepare reports" activity will be represented by _____, the "employee payroll file" will be represented by _____, and the "bank" will be represented by _____.
- a circle; two horizontal lines; a square
 - a circle; two horizontal lines; two horizontal lines
 - a rectangle; a square; a circle
 - a square; two horizontal lines; a circle
33. How should control processes and control actions be represented in a data flow diagram?
- using a square to represent a data source and destination
 - using a circle to represent a transformation process
 - using two horizontal lines to represent a data store
 - control processes and actions should be ignored in a DFD
34. The term used to refine a high-level or summary view data flow diagram into successively lower levels to provide greater amounts of detail is
- expand.
 - explode.
 - implode.
 - enlarge.
35. An analytical technique that uses standard symbols to graphically represent an information system in a clear, concise, and logical manner is called a
- data flow diagram.
 - flowchart.
 - schema.
 - narrative.
36. Flowcharts are created using a standard set of symbols. These symbols can be divided into four basic categories. A square denotes an auxiliary operation and is found in which flowchart symbol category?
- input/output
 - processing
 - storage

d) flow and maintenance

37. What should be the first thing the creator of a flowchart does before beginning a flowchart?

- a) understand the system to be flowcharted
- b) identify the entries to be flowcharted
- c) design the flowchart so that it proceeds from left to right and top to bottom
- d) use standard flowcharting symbols

38. When designing either a DFD or a flowchart, a good rule to follow is

- a) to proceed from left to right.
- b) to proceed from top to bottom.
- c) to proceed from left to right and top to bottom.
- d) to identify exception procedures by using a rectangle.

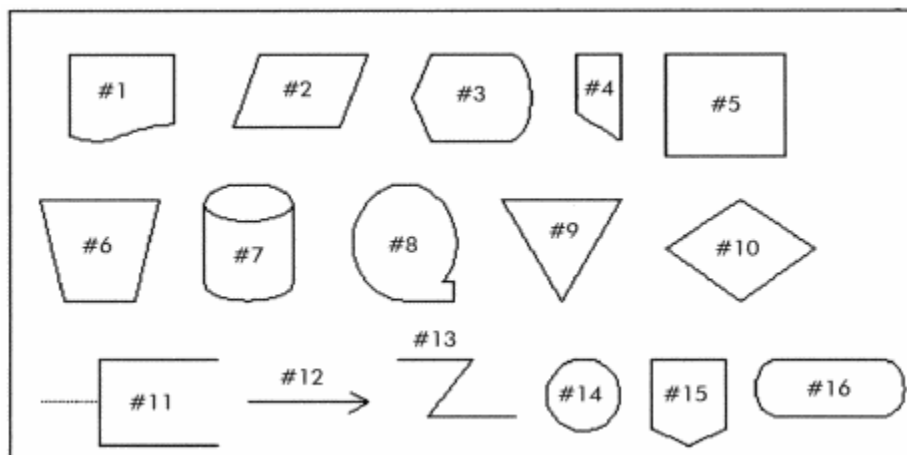
39. Which is a true statement regarding the use of the manual processing symbol in a flowchart?

- a) If a document is moved from one column to another, show the document only in the last column.
- b) Each manual processing symbol should have an input and an output.
- c) Do not connect two documents when moving from one column to another.
- d) Each manual processing symbol should have an off-page connector.

40. Which is a true statement regarding the document flowchart?

- a) It illustrates the sequence of logical operations performed by a computer.
- b) It is particularly useful in analyzing the adequacy of internal control procedures.
- c) It should ignore control processes and actions.
- d) It is not normally used in the systems design process.

Use the chart below to answer the following questions regarding flow chart symbols.



41. Which symbol would be used in a flowchart to represent a computer process?

- a) #1
- b) #2
- c) #5

- d) #15
42. Which symbol would be used in a flowchart to represent a decision?
- a) #10
 - b) #16
 - c) #9
 - d) #6
43. Which symbol would be used in a flowchart to represent an invoice sent to a customer?
- a) #2
 - b) #6
 - c) #1
 - d) #15
44. Which symbol would be used in a flowchart to represent a general ledger?
- a) #2
 - b) #1
 - c) #3
 - d) #5
45. Which symbol would be used in a flowchart to represent a manual process?
- a) #5
 - b) #6
 - c) #10
 - d) #11
46. Which symbol would be used in a flowchart to represent a connection to another part of the flowchart on the same page?
- a) #4
 - b) #13
 - c) #14
 - d) #15
47. Which symbol would be used in a flowchart to represent a connection to another part of the flowchart on a different page?
- a) #4
 - b) #13
 - c) #14
 - d) #15
48. Which symbol would be used in a flowchart to represent a file of paper documents?
- a) #7
 - b) #8
 - c) #9
 - d) #15
49. Which symbol would be used in a flowchart to represent a general ledger master file kept on magnetic disk?

- a) #2
- b) #5
- c) #7
- d) #8

50. Which symbol would be used in a flowchart to represent employee time cards sent by department managers to the payroll department?

- a) #1
- b) #4
- c) #11
- d) #16

51. Which symbol would be used in a flowchart to represent the display of a report on a computer screen?

- a) #1
- b) #2
- c) #3
- d) #11

52. Which symbol would be used in a flowchart to represent the addition of information about a step represented in another symbol on the flowchart?

- a) #1
- b) #5
- c) #11
- d) #15

53. Which symbol would be used in a flowchart to represent a payroll master file kept on magnetic tape?

- a) #4
- b) #7
- c) #8
- d) #9

54. Which symbol would be used in a flowchart to represent a beginning, an ending, or a connection to another procedure?

- a) #9
- b) #14
- c) #15
- d) #16

55. Which symbol would be used in a flowchart to represent a flow of data or documents?

- a) #12
- b) #13
- c) #14
- d) #15

56. Which symbol would be used in a flowchart to represent a connection by a data communication link?

- a) #12
- b) #13
- c) #14
- d) #15

57. In a document flowchart of a manual payroll processing system, "update employee file" will be shown by a(n) _____ symbol, and "prepare payroll check" will be shown by a(n) _____ symbol.

- a) input; output
- b) input; manual operation
- c) manual operation; output
- d) manual operation; manual operation

58. A flowchart is an analytical tool used to describe some aspect of an information system. A flowchart that depicts the relationships among the input, processing, and output of an AIS is

- a) an internal control flowchart.
- b) a document flowchart.
- c) a system flowchart.
- d) a program flowchart.

59. Which type of flowchart is an excellent vehicle for describing information flows and procedures within an AIS?

- a) a program flowchart
- b) a document flowchart
- c) an internal control flowchart
- d) a system flowchart

60. In a program flowchart comparison of one or more variables, the transfer of flow to alternative logic paths is represented by

- a) a terminal.
- b) data/information flow.
- c) computer operation.
- d) decision diamond.

SHORT ANSWER

61. P62 50) What are the various ways to document a system?

62. P62 51) List the various types of flowcharts.

63. P 62-63 52) Briefly discuss the various levels of understanding necessary to deal with and comprehend AIS documentation.

64. P63 59) Name two reasons why it is important to have a working knowledge of DFDs and flowcharting.

65. What does SAS no. 94 require that is relevant to documentation tools?

66. P64 53) What are the basic elements of a data flow diagram?

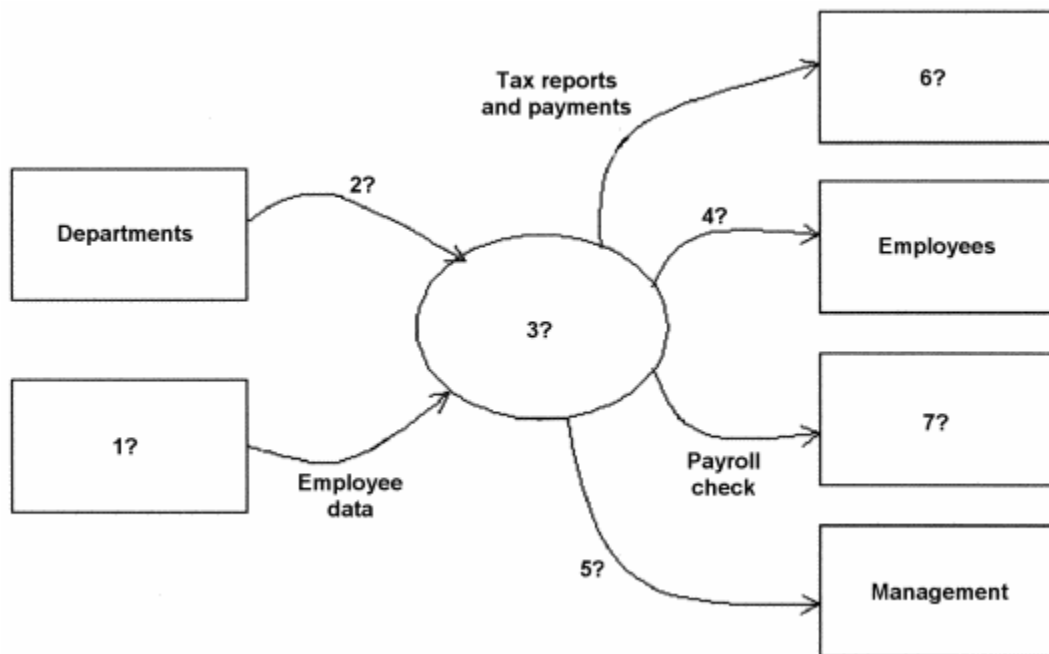
67. P64 54) What are the basic symbols used in data flow diagrams?

68. P65 55) When does an analyst need to show two data flow lines in a DFD?

69. P71 56) What are the four categories of flowcharting symbols?
70. P66 58) What are the different levels of DFDs?
71. P77 60) What is a system flowchart? What is a program flowchart? How are these two interrelated?
72. Ppp 57) How is a DFD different from a flowchart?

ESSAY

73. Explain the relevance of the Sarbanes Oxley Act to the documentation tools you have studied in this chapter.
74. P 64-65 62) Discuss the idea of a data flow.
75. P66 or 69 61) What is the value of using a context diagram when working with DFDs?
76. P 69 63) Identify five important guidelines for drawing a DFD. Select one from your list and describe why it could be the most important one to consider when preparing a DFD. (Hint: You may want to support your argument with an example.)
77. P 71 64) Identify five important guidelines for drawing a flowchart. Select one from your list and describe why it could be the most important one to consider when preparing a flowchart. (Hint: You may want to support your argument with an example.)
78. Following is a context diagram for a current Payroll Processing System.) Identify the data sources and destinations, data flows, and transformation process marked by question marks.) What would you need to do to explode this diagram?



79. Four flowcharts have been provided for the following descriptions. Identify the mistake(s) in each flowchart. Item a, below, corresponds to Figure a, then b, below, corresponds to figure b, and so on.

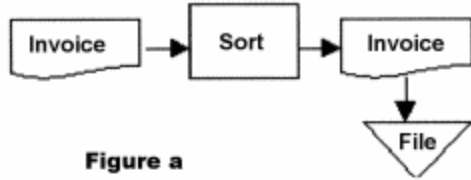


Figure a



Figure b

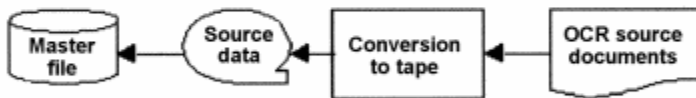


Figure c

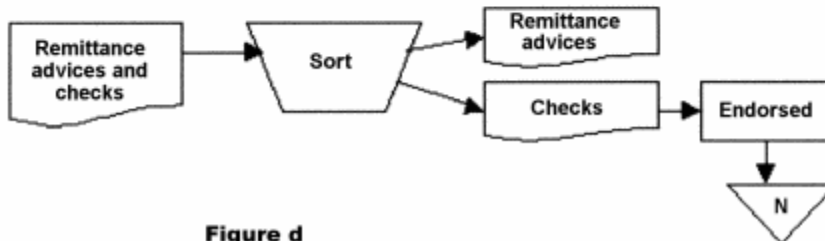


Figure d

ANSWER KEY

- 1) A
- 2) B
- 3) B
- 4) B
- 5) C
- 6) D
- 7) C
- 8) D
- 9) D
- 10) A
- 11) A
- 12) D
- 13) B
- 14) C
- 15) A
- 16) D
- 17) B
- 18) A
- 19) B
- 20) C
- 21) A
- 22) B
- 23) B
- 24) A
- 25) D
- 26) C
- 27) B
- 28) A
- 29) D
- 30) D
- 31) B
- 32) A
- 33) D
- 34) B
- 35) B
- 36) B
- 37) A
- 38) C
- 39) B
- 40) B
- 41) C
- 42) A
- 43) C
- 44) A
- 45) B
- 46) C
- 47) D
- 48) C
- 49) C
- 50) A
- 51) C
- 52) C
- 53) C
- 54) D

- 55) A
- 56) B
- 57) D
- 58) C
- 59) D
- 60) D
- 61) Data flow diagrams, document flowcharts, system flowcharts, program flowcharts, and narrative documentation are the various ways to document a system.
- 62) Document flowcharts, System flowcharts, Program flowcharts, Internal control flowcharts
- 63) Depending on the job function of the professional, at a minimum a person should be able to read AIS and system documentation. A person may also be called upon to evaluate internal control system documentation in order to identify control strengths and weaknesses as well as recommend improvements. The AIS professional may be engaged to prepare documentation, which requires the greatest amount of skill and understanding of a particular system.
- 64) First, data flow diagrams and flowcharts are the two most frequently used development and documentation tools used today. Second, since systems development is extremely complex, DFDs and flowcharts are tools that are used to create order from chaos and complexity.
- 65) Statement on Auditing Standards (SAS) 94 requires that independent auditors understand the automated and manual procedures an entity uses. One of the best ways to gain this understanding is to use the flowcharts to document the internal control system, as weaknesses and strengths are more easily spotted from such graphic portrayals.
- 66) Data sources and destinations, data flows, transformation processes, and data stores are the basic elements of a data flow diagram.
- 67) The basic symbols used in data flow diagrams are: data source and destination - square box; data flows - arrow; processes - circle; and data stores - horizontal, parallel lines.
- 68) A data flow may consist of one or more pieces of datum. The determining factor is whether the data elements always flow together at the same time. For example, "customer payment" have both payment and remittance data. Since these elements always flow together, only one data flow line is required. However, data flows between the customer and the payment processes have customer inquiries and cash receipts; these data items do not always flow together at the same time. In such a case, two data flow lines will be shown.
- 69) The four categories of flowcharting symbols are: input/output, processing, storage, flow and miscellaneous.
- 70) The highest-level or summary view DFD, which shows major inputs/outputs and a single process is called a context diagram. The DFD itself shows inputs, major processes, and outputs; each process in the DFD can be "exploded" or shown in greater level of detail with the sub-processes and related data flows.
- 71) Computer systems flowcharts depict the relationships among the input, processing, and output of an AIS. The program flowchart illustrates the sequence of logical operations performed by a computer in executing a program. System flowcharts identify processing areas but do not show how the processing is done. The detailed logic used by the computer to perform the processing is shown on a separate program flowchart.
- 72) The purpose of a DFD is to diagram the origins, flow, transformation, storage, and destination of data. The purpose a flowchart is to present a graphical description of the flow of documents, relationships among input, processing, and output, or the sequence of logical operations in an information system or program. A DFD is limited to basic symbols and lines, and focuses on the flow and use of data. A flowchart will generally be more complex, and more focused on the managerial, AIS, or IS aspects of the organization.
- 73) The passage of the Sarbanes Oxley Act of 2002 made documentation skills even more important because it requires of public companies' management an annual internal control report. The auditor must evaluate this management assessment of internal control and attest to its accuracy. Therefore, the company and the auditors must document and test the internal controls -- documentation tools, such as flowcharts, are used to do this.
- 74) A data flow is a graphic representation of the flow of data between processes, data stores, and data sources and destinations. A data flow is really a form of communication. When the analyst draws a curved or straight line with an arrow at one end, what is represented is a form of communication

- among the other elements of the data flow process. Consider for example a data source being depicted by a box. The box represents a data source. Data then is sent from the source to a circle, which represents a transformation process. The source of data sends the flow to the transformation process, which will process the data and somehow use the data or turn it into useful information. Note that data flows can represent one or more pieces of datum. Because data flows may have more than one data element, the analyst must determine whether to show one or more lines. Good DFDs and data flow lines in such diagrams eliminate the need for users and analysts to "infer" what type of information is flowing.
- 75) In order to create a useful DFD, the analyst must determine system boundaries-what is to be included or excluded from the system. A context diagram will help to achieve this goal, since it is a good way to depict the boundaries of the system. The analyst first creates a context diagram by placing a circle in the middle of the diagram. The circle represents the system under consideration. On either side of the circle, boxes are created which represent outside entities the system interacts with directly. Data flow lines are drawn to show the direction of the flow of data. After this pictorial representation has been completed, the analyst can then better assess the boundaries of the system and amount of interaction between the system and outside entities.
- 76) Understand the system. Ignore certain aspects of the system (such as control processes and control actions). Determine system boundaries. Develop a context diagram. Identify data flows. Group data flows. Identify transformation processes. Group transformation processes. Identify all files or data stores. Identify all data sources and destinations. All DFD elements are named. Subdivide the DFD. Give each process a sequential number. Repeat the process. Prepare a final copy. (Student answers will vary depending on the items chosen and the quality of their argument. The text provides various items that could be used to answer this question.)
- 77) Use interviews, questionnaires, or narrative descriptions to understand the system before flowcharting it. Identify the different entities to be flowcharted such as departments, job functions, or external parties. Also identify documents and information flows along with the activities or processes performed on the data. Organize the flowchart using columns when several entities are involved in the process. Focus on the normal operations and include all relevant procedures and processes. Flowcharts should flow from top to bottom and from left to right. The origin and disposition of documents should be clearly identified by a clear beginning and end in the flowcharts. Use standard flowchart symbols. Multiple documents should be identified by numbers shown in the top right-hand corner of the document symbol. Documents do not directly connect with each other, except when moving from one column to another. Use on-page and off-page connectors to organize flowcharts. Use arrowheads to direct the flow of documents. Clearly label the pages, such as 1 of 3, 2 of 3, and 3 of 3. Documents or reports should be first shown in the column in which they originate and then moved to other columns. Use computer processing symbols to show movement of data in and out of the computer system. Filing operations can be directly shown with one line, no manual processing symbol required. Flowcharting is an iterative process. The first attempt should be a rough draft that is refined with each successive pass. Do not clutter flowcharts; redesign the flowchart as necessary. Review the flowchart for accuracy. On the final copy of the flowchart, the name of the flowchart, date, and the preparer's name should be shown. (Student answers will vary depending on the items chosen and the quality of their argument. The text provides various items that could be used to answer this question.)
- 78) 1 - Human resources, 2 - Time cards, 3 - Payroll processing system, 4 - Employee paychecks or pay-stubs, 5- Payroll report, 6 - Government agencies, 7- Banks. To explode this diagram, additional information is needed to identify detailed procedures within the payroll processing activity as well as additional inputs and outputs. It would be useful to obtain a comprehensive narrative of the payroll processing procedures for review and identification of these items. If there is no narrative available, interviews are another source of information.
- 79) a. Figure a - the sort symbol should be manual operation symbol. Figure b - the file update symbol should be computer processing and the arrow from transaction file should flow into file update. Figure c - the arrows should point from left to right and the computer processing symbol is missing before the master file.. Figure d - the sort symbol is manual and should be computer processing, checks are endorsed manually but the symbol is for computer processing and endorsed checks are sent to the bank, hence the file symbol is wrong.