MCA-T116: Information System Analysis, Design and Implementation

Objective Questions

UNIT-I

Q1.How many steps are in the systems development life cycle (SDLC)?
A. 4
B. 5
C. 6
D. 10

Q2.The first step in the systems development life cycle (SDLC) is:
A. Analysis.
B. Design.
C. Problem/Opportunity Identification.
D. Development and Documentation.

Q3.Most modern software applications enable you to customize and automate various features using small custom-built "mini programs" called:
A. macros.
B. code.
C. routines.
D. subroutines.

Q5.How many steps are in the program development life cycle (PDLC)?
A. 4
B. 5
C. 6
D. 10

Q5.The make-or-buy decision is associated with the _____ step in the SDLC.
A. Problem/Opportunity Identification
B. Design
C. Analysis
D. Development and Documentation

Q6.In the Analysis phase, the development of the _____ occurs, which is a clear statement of the goals and objectives of the project.
A. documentation
B. flowchart
C. program specification

D. design

Q7.Actual programming of software code is done during the _____
step in the SDLC.
A. Maintenance and Evaluation
B. Design
C. Analysis
D. Development and Documentation

Q8.Enhancements, upgrades, and bug fixes are done during the
_____ step in the SDLC.
A. Maintenance and Evaluation
B. Problem/Opportunity Identification
C. Design
D. Development and Documentation

Q9.Technical writers generally provide the _____ for the new
system.
A. programs
B. network
C. analysis
D. documentation

Q10._____ spend most of their time in the beginning stages of the
SDLC, talking with end-users, gathering information, documenting
systems, and proposing solutions.
A. Systems analysts
B. Project managers
C. Network engineers
D. Database administrators

Q11._____ is the process of translating a task into a series of
commands that a computer will use to perform that task.
A. Project design
B. Installation
C. Systems analysis
D. Programming

Q12.Translating the algorithm into a programming language occurs at the
_____ step of the PDLC.
A. Debugging
B. Coding
C. Testing and Documentation
D. Algorithm Development

Q13.The problem statement should include all of the following EXCEPT:
A. input.
B. output.
C. processing.
D. storage.

Q14. Which of the following would improve the effectiveness of a system?
A. Install a barcode reader to reduce the time needed to enter data.
B. Make it easier for employees to access information by developing a database.
C. Allow management to make timely decisions by providing up-to-date information in a spreadsheet.
D. Automate a manual process to reduce salaries.

Q15.The correct order of steps to solve a problem is
A. Analyse, design, develop, test, evaluate, implement, document.
B. Analyse, design, test, develop, document, implement, evaluate.
C. Design, analyse, develop, document, implement, test, evaluate.
D. Analyse, design, develop, test, document, implement, evaluate.

Q16.A sales assistant needs to record a sale by manually completing a form in a docket book. What is a likely problem that this practice could lead to?
A. It takes too long for sales to be recorded and processed.
B. The sales assistant is under-qualified for the task.
C. The use of a docket book is old fashioned.
D. The information in the docket book is not timely.

Q17. In order to understand the working of an organization for which a computerbased system is being designed, an analyst must
A. look at only current work and document flow in the organization discuss with top level and middle level management only
B. interview top, middle, line managers and also clerks who will enter data and use the system
C. only clerical and middle level staff who have long experience in the
D. organization and will be users of the system

Q18. Hardware study is required
A. to find out cost of computer system needed
B. to determine the type of computer system and software tools needed to meet the final system specification
C. to make sure that the system does not become obsolete
D. to find how to implement the system

Q19. Hardware study is carried out
A. after the final system is specified

B. at the requirements specification stage
C. before the requirements are specified
D. whenever management decides it is necessary

Q20. Requirement specification is carried out
A. after requirements are determined
B. before requirements are determined
C. simultaneously with requirements determination
D. independent of requirements determination

UNIT II

Q1.The organized process or set of steps that needs to be followed to develop an information system is known as the:
A. analytical cycle.
B. design cycle.
C. program specification.
D. system development life cycle.

Q2. The _____ determines whether the project should go forward.
A. feasibility assessment
B. opportunity identification
C. system evaluation
D. program specification

Q3.Which of the following could not be considered an organisational goal?
A. Increase company profit margin.
B. Expand customer base.
C. Provide quality service.
D. Complete backups every Friday.

Q4.An organisation's goal is to 'improve the communication of events to members'. Which of the following strategies would best achieve this aim?
A. Reduce labour costs.
B. Produce a regular newsletter.
C. Make sure all membership information is accurate.
D. Use a spreadsheet to keep track of finances.

Q5.Which of the following is not a component of an information system?
A. Equipment
B. End-user
C. Organisational goals
D. Procedures

Q6.Which of the following would not be considered an end-user of an information system?
A. A student who accesses information on a website.
B. A programmer who writes code for a software module.
C. A customer who uses a credit card in an EFTPOS machine.
D. A sales assistant in a video shop who searches a database for a specific title.

Q7.Which of the following is a primary source of data?
A. A student reads the voltage across a lamp using a voltmeter.
B. The meaning of a word is read from a dictionary.
C. A website provides information on the cost of air flights.
D. A sales brochure indicates what items are on special.

Q8.A database of patient information for a medical clinic is to be developed. From the patient's data below, which is the least important?
A. Patient's name
B. Patient's age
C. Patient's allergies
D. Patient's credit rating

Q9.Accidental damage to an information system can be caused by
A. User error.
B. Failure to follow file management procedures.
C. Failure of hardware components.
D. All of the above.

Q10.The major goal of requirement determination phase of information system development is
A. determine whether information is needed by an organization
B. determine what information is needed by an organization
C. determine how information needed by an organization can be provided
D. determine when information is to be given.

Q11Information requirements of an organization can be determined by
A. interviewing managers and users and arriving at the requirements based on consensus
B. finding out what similar organizations do
C. telling organization what they need based on your experience
D. sending a questionnaire to all employees of the organization.

Q12.It is necessary to prioritize information requirements of an organization at the requirements determination phase as
A. it is always good to prioritize
B. there are conflicting demands from users
C. there are constraints on budgets, available time, human resource and requirement

D. all good organization do it

Q13. It is necessary to consult the following while drawing up requirement specification
A. only top managers
B. only top and middle management
C. only top, middle and operational managers
D. top, middle and operational managers and also all who will use the system

Q14. A feasibility study is carried out
A. after final requirements specifications are drawn up
B. during the period when requirements specifications are drawn up
C. before the final requirements specifications are drawn up
D. at any time

Q15. The main objective of feasibility study is
A. to assess whether it is possible to meet the requirements specifications
B. to assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware
C. to assist the management in implementing the desired system
D. to remove bottlenecks in implementing the desired system

Q16. It is necessary to carry out a feasibility study as
A. top management can not ensure that a project is feasible before calling a system analyst
B. top management is not sure what they want from the system
C. even though top management is in favor of the system, technology may not be mature for implementation
D. all organizations do it

Q17.Feasibility study is carried out by
A. managers of the organization
B. system analyst in consultation with managers of the organization
C. users of the proposed system
D. systems designers in consultation with the prospective users of the system

Q18. Initial requirements specification is
A. not changed till the end of the project
B. continuously changed during project implementation
C. only a rough indication of the requirement
D. changed and finalized after feasibility study

Q19. Final specifications are drawn up by
A. system analyst in consultation with the management of the organization
B. the managers of user organization

C. system analyst in consultation with programmers

D. system designers along with users

Q20. The main goal of arriving at a final specification is

A. to tell the organization's managers how the system will function

B. to tell the organization's managers what the proposed system will achieve in a language understood by them

C. to compute the cost of implementing the system

D. to assist in designing the system

UNIT-III

Q.1 System design is carried out

A. as soon as system requirements are determined

B. whenever a system analyst feels it is urgent

C. after final system specifications are approved by the organization

D. whenever the user management feels it should be done

Q2. The primary objective of system design is to

A. design the programs, databases and test plan

B. design only user interfaces

C. implement the system

D. find out how the system will perform

Q3.It is necessary to design an information system to easily accommodate change, because

A. new computers are introduced every year

B. new computer languages become popular every year

C. organizations' requirements change over a period of time

D. systems need continuous debugging

Q4. In a DFD external entities are represented by a

A. rectangle

B. ellipse

C. diamond shaped box

D. circle

Q5.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

Q6. A rectangle in a DFD represents

A. a process

B. a data store
C. an external entity
D. an input unit

Q7. External Entities may be a
A. source of input data only
B. source of input data or destination of results
C. destination of results only
D. repository of data

Q8. By an external entity we mean a

A. unit outside the system being designed which can be controlled by an analyst
B. unit outside the system whose behavior is independent of the system being designed
C. a unit external to the system being designed
D. a unit which is not part of a DFD

Q9A data store in a DFD represents
A. a sequential file
B. a disk store
C. a repository of data
D. a random access memory

Q10.A data flow can
A. only enter a data store
B. only leave a data store
C. enter or leave a data store
D. either enter or leave a data store but not both

Q11.A data cannot flow between a store and
(i) **a store**
(ii) **a process**
(iii) **an external entity**
A. i and iii
B. i and ii
C. ii and iii
D. ii

Q11.Changing an operational information system is
A. impossible
B. expensive and done selectively
C. never required
D. usually done

Q12.System analysts have to interact with

i) managers of organizations
ii) users in the organization
iii) programming team
iv) data entry operator
A. iii and iv
B. i, ii and iii
C. ii, iii and iv
D. ii and iii

Q13.The final specifications are arrived at
A. after feasibility study
B. during feasibility study
C. just before implementation phase
D. when the system is being designed

Q14. System approval criteria are specified
A. when the final specifications are drawn up
B. during feasibility study
C. during the requirements specifications stage
D. during system study stage

Q15. The primary responsibility of a systems analyst is to
A. specify an information system which meets the requirements of an
organization
B. write programs to meet specifications
C. maintain the system
D. meet managers of the organization regularly

Q16.The responsibilities of a system analyst include
i) defining and prioritizing information requirement of an organization
ii) gathering data, facts and opinions of users in an organization
iii) drawing up specifications of the system for an organization
iv) designing and evaluating the system
A. i and ii
B. i, ii and iv
C. i, ii, iii and iv
D. i, ii and iii

Q17. The most important attribute of a systems analyst is
A. excellent programming skills
B. very good hardware designing skills
C. very good technical management skills
D. very good writing skills

Q18. Among the attributes of a good systems analyst the following are essential

i) knowledge of organization
ii) analytical mind
iii) ability to communicate orally
iv) excellent mathematical abilities
A. i and ii
B. i, ii and iii
C. i, ii and iv
D. i, iii and iv

Q19. Among the attributes of a systems analyst the following are most important
i) knowledge of computer systems and currently available hardware
ii) good interpersonal relations
iii) broad knowledge about various organizations
iv) very good accountancy knowledge
A. i, iii and iv
B. i and iii
C. i, ii and iv
D. i, ii and iii

Q20. A physical DFD

A. has no means of showing material flow
B. does not concern itself with material flow
C. can show only stored material
D. can show the flow of material

UNIT-IV

Q.1 **Managers in organizations should not design their own systems as**
A. systems have to interact with other systems
B. they do not have the special skills necessary to design systems
C. it is not their job
D. they are always very busy
Q2.Systems analyst should use software tools in their work as
A. all analysts use them
B. they assist in systematic design of systems
C. they are inexpensive
D. they are easily available

Q3.A transaction processing system is concerned with
A. Operational day-to-day activities.
B. Strategic decision-making support.
C. A large database of specialised knowledge.
D. Support for an organisation's management needs.

Q4.Which design tool would be most appropriate for a website?
A. Layout diagrams
B. Nassi-Schneidermann diagram
C. Storyboard

Q5.Data by itself is not useful unless
A. It is massive
B. It is processed to obtain information
C. It is collected from diverse sources
D. It is properly stated

Q6.For taking decisions data must be
A. Very accurate
B. Massive
C. Processed correctly
D. Collected from diverse sources

Q6.Strategic information is needed for
A. Day to day operations
B. Meet government requirements
C. Long range planning
D. Short range planning

Q7. Strategic information is required by
A. Middle managers
B. Line managers
C. Top managers
D. All workers

Q7.Tactical information is needed for
A. Day to day operations
B. Meet government requirements
C. Long range planning
D. Short range planning

Q8.Tactical information is required by
A. Middle managers
B. Line managers
C. Top managers
D. All workers

Q9.Operational information is needed for
A. Day to day operations
B. Meet government requirements

C. Long range planning
D. Short range planning

Q10.Operational information is required by
A.   Middle managers
B.   Line managers
C.   Top managers
D.   All workers

Q11.Statutory information is needed for
A.   Day to day operations
B.   Meet government requirements
C.   Long range planning
D.   Short range planning

Q12.In motor car manufacturing the following type of information is strategic
A.   Decision on introducing a new model
B.   Scheduling production
C.   Assessing competitor car
D.   Computing sales tax collected

Q13.In motor car manufacturing the following type of information is tactical
A.   Decision on introducing a new model
B.   Scheduling production
C.   Assessing competitor car
D.   Computing sales tax collected

Q14.In motor car manufacturing the following type of information is operational
A.   Decision on introducing a new model
B.   Scheduling production
C.   Assessing competitor car
D.   Computing sales tax collected

Q15.Match quality of information and how it is ensured using the following list
        QUALITY HOW ENSURED
(i) Up-to-date   (iv) Include all data to present time
(ii) Brief   (v) Give at right time
(iii) Significance   (vi) Use attractive format and understandable
     graphical charts
A. (i) and (v)
B.(ii) and (vi)
C. (iii) and (vi)
D. (i) and (vi)

Q16.Match quality of information and how it is ensured using the following list
QUALITY HOW ENSURED

(i)Brief   (iv) Unpleasant information not hidden
(ii)Relevant   (v) Summarize relevant information
(iii) Trustworthy   (vi) Understands user needs
A. (i) and (iv)
B. (ii) and (v)
C. (iii) and (vi)
D. (i) and (v)

Q17. Master files are normally stored in
A.   a hard disk
B.   a tape
C.   CD – ROM
D.   computer's main memory

Q18. Master file is a file containing
A.   all master records
B.   all records relevant to the application
C.   a collection of data items
D.   historical data of relevance to the organization

Q19.Edit program is required to
A.   authenticate data entered by an operator
B.   format correctly input data
C.   detect errors in input data
D.   expedite retrieving input data

Q20.Data rejected by edit program are
A.   corrected and re- entered
B.   removed from processing
C.   collected for later use
D.   ignored during processing

UNIT V

Q1. **System test plan is specified**
    A. when the final specifications are drawn up
    B. during feasibility study
    C. during the requirements specifications stage
    D. during system study stage

Q2.The primary objective of system implementation is
i) to build a system prototype

ii) to train users to operate the system
iii) to implement designed system using computers
iv) write programs, create databases and test with live data
    A. i, iii
    B. i, ii, iii
    C. ii ,iii
    D. ii, iv

Q3.During system implementation the following are done
i) programs are written and tested with operational data
ii) user documentation is created and users trained
iii) programmers are recruited and trained
iv) the system is tested with operational data
    A. i and iii
    B. ii and iii
    C. ii and iv
    D. i, ii & iv

Q4.System evaluation is carried out
    A. after the system has been operational for a reasonable time
    B. during system implementation
    C. whenever managers of user organization want it
    D. whenever operational staff want it

Q5. The main objective of system evaluation is
    A. to see whether the system met specification
    B. to improve the system based on operational experience for a period
    C. to remove bugs in the programs
    D. to asses the efficiency of the system

Q6. Systems are modified whenever
    A. user's requirements change
    B. new computers are introduced in the market
    C. new software tools become available in the market
    D. other similar organization modify these system

Q7.The main objective of system modification is
    A. to use the latest software tools
    B. to meet the user's new/changed needs
    C. to use the latest hardware
    D. to have the most modern system

Q8.To easily modify the existing system it is necessary to
    A. use good software tools
    B. use the best hardware available

C. design the system which can be changed at low cost
D. keep the programming team happy

Q9._____ design and implement database structures.
A. Programmers
B. Project managers
C. Technical writers

Q10.The problem statement includes the _____, which lists specific
input numbers a program would typically expect the user to enter and
precise output values that a perfect program would return for those input
values.
A. testing plan
B. error handler
C. IPO cycle
D. input-output specification
E. Database administrators

Q11._____ manage the system development, assign staff, manage
the budget and reporting, and ensure that deadlines are met.
A. Project managers
B. Network engineers
C. Graphic designers
D. Systems analysts

Q12.A milestone in project management indicates
A. The passing of 50% of the time allocated to the project.
B. The completion of the project.
C. The conclusion of an important stage of a project and has zero time duration.
D. The conclusion of an important stage of a project and has a time duration equal to the
        sum of the time durations for each step of that stage.

Q13. A project has a critical path of 21 days. The 'testing the solution' task has a slack time (or
        lag time) of three days. What is the minimum time the project can be completed?
A. 18 days
B. 21 days
C. 24 days
D. Depends on whether the 'testing the solutio' task lies on the critical path.

Q14.Constraints on data to be used in a presentation include
A. Copyright restrictions, trademarks, validation techniques.
B. Copyright restrictions, trademarks, privacy regulations.
C. Copyright, privacy regulations, validation techniques.
D. Proofreading, validation techniques, testing the message.

Q15. A web-based solution has been developed and needs to be tested. Which attributes should be tested?
A. Useability, functionality, spelling.
B. Useability, spelling, presentation.
C. Useability, functionality, presentation.
D. Spelling, functionality, presentation.

Q16. Decision support systems are essential for
A. Day–to-day operation of an organization.
B. Providing statutory information.
C. Top level strategic decision making.
D. Ensuring that organizations are profitable.

Q17. In motor car manufacturing the following type of information is statutory
A. Decision on introducing a new model
B. Scheduling production
C. Assessing competitor car
D. Computing sales tax collected

Q18. In a hospital information system the following type of information is strategic
A. Opening a new children's ward
B. Data on births and deaths
C. Preparing patients' bill
D. Buying an expensive diagnostic system such as CAT scan

Q19. In a hospital information system the following type of information is tactical
A. Opening a new children's' ward
B. Data on births and deaths
C. Preparing patients' bill
D. Buying an expensive diagnostic system such as CAT scan

Q20. Volume of tactical information is
A. Condensed
B. Detailed
C. Summarized
D. relevant

Short Questions

UNIT I

1. What is System? Explain its Elements.
2. Explain the types of System.
3. Write the characteristics of system.
4. Difference Between Formal and Informal System.
5. What is System Analyst? Explain the roll of it.

6. Difference Between system analysis and system design.
7. Explain the economic, hardware and software factors for vendor's selection.
8. When should be a system evaluated?
9. Why the concept of System is so important in organization and information system?
10. How do the structured analysis and the System Development Life cycle methods differ?
11. Explain System Prototype method.

Long Questions:

1. Are excellent programmers necessarily excellent system analysts? Justify your answer.
2. Why should a systems analyst be able to communicate well?
3. Write the different techniques which can be used by the systems analyst to obtain a detailed understanding of the various business processes.
4. What do you understand by Initial Requirements? Discuss various categories of
5. requirements.
6. Explain SDLC.
7. Explain various activity involve in system design.
8. Explain role of system analyst in system development process.

Unit II

Short Question

1. What are Information Systems? What are the Categories of Information System?
2. Why are data fields coded in an information system?
3. What is the impact of the information Systems on our every day activities? Where has the greatest impact been in business?
4. What is meant by Information Hiding?
5. What are the methods of gathering information.
6. Explain Portability. Every information system must be portable, Comment.
7. What is the main aim of the Requirements Workflow?
8. Explain all the inter-related types of feasibility studies.
9. Explain all the major types of documentation.
10. Who do you think should participate in determining the information requirements of a student's hostel?
11. Discuss the Fact Finding technique.
12. What do you understand by the term *feasibility study of a solution*?
13. Explain the benefits of Case Tools.

Long Questions

1. Describe the different types of Information Systems used in organization. What characteristics distinguish one from anther? What characteristics are similar among each of the systems?
2. Explain all the different components of management in accordance with decision oriented

view.
3. What is the difference between information requirement determination and Specification?
4. What benefits do you expect if an information system for a hostel is designed?
5. Describe the general strategy an analyst should be used to gather information. Explain them.
6. What are the requirements of a good coding scheme?
7. Why is feasibility analysis necessary before designing a system?
8. List various factors which are responsible for the quality of a system. Also explain the different levels of quality assurance.
9. Explain Case Tools. Explain with its Components.

Unit III
Short Question

1. What are the Tools for System Development?
2. What is a data dictionary?
3. Why is a data dictionary necessary?
4. Define Interviewing
5. What are the main advantages of creating a data dictionary?
6. What data about a data element is stored in a data dictionary?
7. What is the purpose of a data validation program?
8. Explain Decision Table with example.
9. Define an actor?
10. Explain Structured English.
11. What are the main principles used in designing forms for data entry?
12. What is an entity? Give examples of entities.

Long Questions

1. Define a DFD. List out the Symbol used in DFD. Write the conventions that govern the construction of DFDS. Design a DFD for a study centre management system.
2. What is the Functional Decomposition Diagram. Explain
3. What is meant by functional and nonfunctional requirement?
4. Design a dialogue hierarchy and the screens for a system used to reserve seats in long distance buses.
5. Differentiate between Logical DFD and Physical DFD.
6. Draw the Payroll System.
7. Draw the Inventory System.
8. Draw the Library System.
9. Draw the Finance Accounting System.
10. What is a relationship? In what way is it different from an entity?
11. Draw an E-R diagram showing the cardinality for the following:
(i) A bill is sent to a customer. A customer can receive many bills.
(ii) Students apply for seats in colleges. Each student can atmost get one seat. A college has

many seats.

Unit IV
Short Question

1. Explain the Principle of Software Design.
2. What is the difference between on – line and off – line data entry?
3. What are the requirements of a good coding scheme?
4. Explain Data Validation of Input design.
5. What are the various classical design activities?
6. Define Architectural design and detailed design.
7. What are the main principles used in designing form for data entry?
8. Explain Design Principle of Output.
9. What is the structure of Report Output?
10. Explain the principal of code design.
11. Write the form design consideration.
12. Why User Interface Design required.

Long Questions

1. What is the main difference between menus, templates and command modes of interactive data entry? When is each of these modes appropriate?
2. Explain the types of Codes.
3. Describe Output Media in detail.
4. Define organization of sequential access, direct access, indexed sequential access, and inverted files.
5. What are the steps used in the design on Database design.
6. Explain the challenges of the Design Phase
7. Develop an analysis and design document for a video library management information system. Make necessary assumptions.

Unit V
Short Question

1. Why do we test systems? How important is testing? Discuss.
2. Outline the various activities that represent a test plan.
3. What design specifications are considered in preparing a test plan?
4. What is implementation? How does it differ from conversion? Elaborate.
5. How System modification is different from software system audit.
6. Review the primary activities of a maintenance procedure.
7. Discuss the various training aids used for training users on a new system.
8. Briefly explain the procedure and makeup of the post-implementation review. Can one perform maintenance on a system without a post implementation review? Why?
9. What is Conversion Plan?

10. What is conversion? Explain its method
11. What is Training.
12. Explain Testing Principle.

Long Questions:

1. Explain all the conversion methods. Also mention an advantage and a disadvantage of each.
2. What is Training? Explain method of Training.
3. What is the need of system testing ? Explain any five testing techniques and their basic objectives.
4. Explain Level of Testing.
5. What activities will you carry out during implementation
6. Explain the various activities in conversion. Which activity is the most important? Why?
7. There are two ways of debugging program software: bottom-up and top-down. how do they differ?