**Unit 1 : Decision Making and Computerized Support**

**Short Questions.**
1. Define system. List the types of system.
2. Define open system. Give an example of closed system.
3. List out the four steps managers take in making a decision.
4. List out some capabilities of computing that can facilitate managerial decision making.
5. Why is it important to classify a problem?
6. What is meant by problem decomposition?
7. Define optimization and contrast it with sub-optimization.
8. How can sensitivity analysis help in the choice phase?
9. Define implementation.
10. Define efficiency and effectiveness, and compare and contrast the two.
11. Differentiate open system and closed system.
12. List the 3 roles of manager in informational category.
13. List the 3 roles of manager in decisional category.
14. List out the behavioral disciplines of decision making.
15. What is the role of spokesperson in decision making process?
16. What do you understand by model?
17. List the three major categories in which 10 roles of manager can be classified.
18. List the 3 roles of manager in interpersonal category.
19. Define productivity.
20. What is national productivity?
21. List the two major performance measures for evaluating and analyzing the systems.
22. Define descriptive model.
23. Define normative model.

**Long Questions.**
1. Describe the three major managerial roles, and list some of the specific activities in each.
2. How can a computer help overcome the cognitive limits of human?
3. Why the web is considered so important for decision support?
4. What are structured, unstructured and semi-structured decisions? Provide two examples of each.
5. What are the nine cells of the decision framework? Explain each of them.
6. How can computers provide support to semi-structured and unstructured decisions?
7. Describe the different categories of models.
8. How can modern IT tools help to synthesize qualitative and quantitative factors in decision making?
9. List and briefly describe Simon's four phases of decision making.
10. What can cause a problem to exist in decision making?
11. What is difference between a problem and its symptoms?
12. Why is establishing problem ownership so important in the decision making process?
13. Compare the normative and descriptive approaches to decision making.
14. Define rational decision making. What does it really mean to be a rational decision maker?
15. Why do people exhibit bounded rationally when solving problems?
16. Define scenario. How is a scenario used in decision making?

17. Explain the difference between a principle of choice and the actual choice phase of decision making.
18. Why do some people claim that the choice phase is the point in time when a decision is really made?
19. How can a DSS support the implementation of a decision?
20. You are about to buy a car. Using Simon's four phase model, describe your activities at each step.
21. Explain the concept of model along with its types.
22. Write the benefits of model.
23. Describe the concept of problem ownership.
24. Write a short note on system along with its types.
25. What do you understand by effectiveness and efficiency, the performance measures for evaluating and analyzing the system? Provide the difference between them. Also give example of each of them.

**Fill in the blanks.**

1. _____performs a number of routine duties of a legal or social nature.
2. The term _____indicates that an individual's problem solving capability is limited when a wide range of diverse information and knowledge is required.
3. The assignment of authority to solve the problem is called _____.
4. _____ is the imitation of reality and has been applied to many areas of decision making.
5. _____decisions are routine and typically repetitive in nature, for which standard solution methods exist.
6. The ratio of outputs to inputs is known as _____.
7. _____ searches the organization and its environment for opportunities and initiates improvement projects to bring about changes; supervises design of certain projects.
8. _____ is responsible for the motivation and activation of subordinates; responsible for staffing, training and associated duties.
9. The degree of success of the organization and manager's job is often measured by the ratio of _____to _____.
10. _____ is the degree to which goals are achieved.
11. _____ is a process by which organizational goals are achieved by using resources.
12. The decision makers are interested in evaluating _____ scenarios.
13. The changes in the _____ environment may affect decision quality by imposing time pressure on the decision maker.
14. A _____ is a simplified representation or abstraction of reality.
15. An iconic model is also called as the _____ model.

**Multiple Choice Questions.**

1. An iconic model may be _____.
   A. three dimensional
   B. two dimensional
   C. multi-dimensional
   D. none of the above

2. Analog models are usually _____ charts or diagrams.
   A. three dimensional
   B. two dimensional
   C. multi-dimensional
   D. none of the above

3. A/An _____ processes are fuzzy, complex problems for which there are no cut-and-dried solution methods.
   A. structured
   B. unstructured
   C. multi-structured
   D. semi-structured

4. The _____ phase begins with the identification of organizational goals and objectives related to an issue of concern and determination of whether they are met.
   A. intelligence
   B. design
   C. choice
   D. implementation

5. _____ is the conceptualization of a problem in an attempt to place it in a definable category, possibly leading to a standard solution approach.
   A. Problem decomposition
   B. Problem identification
   C. Problem classification
   D. Problem solving

6. _____ is a process of choosing among two or more alternative courses of action for the purpose of attaining one or more goals.
   A. Decision making
   B. DSS
   C. Problem solving
   D. KMS

7. Most DSS analyses are performed numerically with _____ models.
   A. mathematical
   B. mental
   C. iconic
   D. analog

8. _____ is one of the most important aspects of the analytical hierarchy process, which helps decision makers incorporate both quantitative and qualitative factors into their decision making models.
   A. Decomposition
   B. Identification
   C. Classification
   D. Problem solving

9. Models have _____ that describe the alternatives from among which a manager must choose.
   A. decision variables
   B. result variables
   C. static variables
   D. dynamic variables

10. _____ may also apply when simplifying assumptions are used in modeling a specific problem.
    A. Sub-optimization
    B. Optimization
    C. Optimizer
    D. None of the above

11. _____ is probably the most common descriptive modeling method.
    A. Simulation
    B. Scenario
    C. Problem classification
    D. Problem solving

12. A _____ is a statement of assumptions about the operating environment of a particular system at a given time; that is a narrative description of the decision situation setting.
    A. Simulation
    B. Scenario
    C. Problem classification
    D. Problem solving

13. _____ analysis is used to determine the robustness of any given alternative; slight changes in the parameters should ideally lead to slight or no changes in the alternative chosen.
    A. Sensitivity analysis
    B. Goal seeking
    C. Simulation
    D. What-if analysis

14. _____ analysis is used to examine major changes in the parameters.

     A. Sensitivity analysis

     B. Goal seeking

     C. Simulation

     D. What-if analysis

15. _____ helps a manager determine values of the decision variables to meet a specific objective.

     A. Sensitivity analysis

     B. Goal seeking

     C. Simulation

     D. What-if analysis

16. _____ involves defining long range goals and policies for resource allocation.

     A. Strategic planning

     B. Management control

     C. Operational control

     D. None of the above

17. _____ deals with the acquisition and efficient use of resources in the accomplishment of organizational goals.

     A. Strategic planning

     B. Management control

     C. Operational control

     D. None of the above

18. _____ deals with the efficient and effective execution of specific tasks.

     A. Strategic planning

     B. Management control

     C. Operational control

     D. None of the above

**State True or False.**

1. The level of productivity or the success of management depends on the performance of managerial functions, such as planning, organizing, directing and controlling.
2. Making a decision means selecting the best alternative from two or more solutions.
3. Semi-structured problem falls between structured and unstructured problems.
4. Group-think can lead to bad decisions.
5. Collecting information and analyzing a problem takes time and can be expensive.
6. The cost of modeling analysis is much lower than the cost of a similar experiment conducted on a real system
7. The cost of making mistakes during a trial-and-error experiment is much lower when models are used than with real systems.

| Unit 2 : Decision Support Systems (DSS) |
|---|

**Short Questions**

1.  Define DSS.
2.  Give difference between DSS and BI.
3.  Which are the three major components of DSS?
4.  List the key characteristics and capabilities of DSS.
5.  What kind of DSS can end users develop in spreadsheets?
6.  Why does a DSS generally include its own database?
7.  What are the major functions (capabilities) of a DBMS?
8.  What is extraction?
9.  What is the function of a query facility?
10. What is the function of a directory?
11. List some of the major functions of an MBMS.
12. Why is model selection for DSS difficult?
13. How can a knowledge component assist in model selection?
14. What is the major purpose of a user interface system?
15. What are the major functions of UIMS?
16. List four new developments in user interfaces.
17. List four new developments in DSS, other than user interface developments.
18. List the various knowledge-based tools that can comprise a knowledge-based management system.
19. What is a spreadsheet?
20. Define the product-mix problem.
21. Define the blending problem.
22. List several common optimization models.
23. List some difficulties that may arise when analyzing multiple goals.
24. List the reasons for performing sensitivity analysis.
25. What is a decision table?
26. What is a decision tree?
27. How can a decision tree be used in decision making?
28. How can VIS be used in operations management?
29. The data management subsystem is composed of which elements?
30. Give full form of ETL.
31. Give difference between internal data and external data.
32. Give difference between private data and public data.
33. Write the 4 main functions of model base management system.
34. What does the model directory contains?
35. What are the major components of decision support mathematical model?
36. Write the applications of LP models.
37. Write the elements of linear programming problem.
38. Write the methods for handling multiple goals when working with MSS.
39. Name the two types of sensitivity analysis.

**Long Questions**

1. Why is it so important to include a model in a DSS?
2. Describe how providing support to a workgroup is different from providing support to group work. Explain why it is important to differentiate these concepts.
3. Write short note on LP product mix formulation.
4. List the major components of DSS and briefly define each.
5. Briefly explain how the Web is utilized in each major component of a DSS.
6. How can a knowledge-based component help each of the other DSS components?
7. Describe the basic structure of a DSS and its components.
8. Describe the similarities and differences among internal, external and private data.
9. Describe the components of a DBMS : the query facility, the directory and the data.
10. Models are classified as strategic, tactical, or operational. What is the purpose of such a classification? Give an example of each type of model.
11. Compare the features and structures of an MBMS to those of a DBMS.
12. Describe the user interface process.
13. Describe why web tools are typically used for DSS interfaces.
14. What capabilities does a knowledge-based management system provide to DSS either in total or to each component?
15. What is a spreadsheet add-in? How can add-ins help in DSS creation and use?
16. Explain why a spreadsheet is so conducive to the development of DSS.
17. List and explain the assumptions involved in LP.
18. List and explain the characteristics of LP.
19. Explain why a manager might perform what-if analysis.
20. Explain why a manager might use goal seeking.
21. Describe what it means to have multiple goals.
22. List the characteristics of simulation.
23. List the advantages and disadvantages of simulation.
24. List and describe the steps in the methodology of simulation.
25. List and describe the types of simulation.
26. Define visual simulation and compare it to conventional simulation.
27. Describe the features of VIS that make it attractive for decision makers.
28. How is an animated film like a VIS application?
29. Write the importance of sensitivity analysis in MSS.
30. Write short note on heuristic programming.

**Fill in the blanks.**

1. _____ is computer based information systems that combine models and data in an attempt to solve non-structured problems with extensive user involvement through a friendly user interface.
2. Improvement of the _____ of decision making (e.g. accuracy, timeliness, quality) rather than its _____ (e.g. the cost of making decision).
3. A _____ specifically aims to support, not to replace, the decision maker.
4. _____ is an approach to using business analytics tools on real time web information to assist in decision making.
5. _____ implies the use of models and data to improve an organization's

performance or competitive posture.

6. _____ describes the business analytics method of forecasting problems and opportunities rather than simply reporting them as they occur.

7. The _____ is a software package that includes financial, statistical, management science, or other quantitative models that provide the system's analytical capabilities and appropriate software management.

8. The _____ provides intelligence to augment the decision maker's own, which is interconnected with the organization's knowledge repository.

9. A _____ is a collection of interrelated data organized to meet the needs and structure of an organization that can be used by more than one person for more than one application.

10. _____data can include guidelines used by specific decision makers and assessments of specific data and/or situations.

11. _____ data include industry data, market research data, census data, regional employment data, government regulations, tax rate schedules, and national economic data.

12. _____ basically consists of the importing of files, summarization, standardization filtration, and condensation of data, this process is known also as extraction, transformation, and load.

13. The _____ is necessary to access, manipulate, and query data.

14. The _____ is a catalog of all the data in a database which contains data definitions, and its main function is to answer questions about the availability of data items, their source, and their exact meaning.

15. A _____ contains routine and special statistical, financial, forecasting, management science, and other quantitative models that provide the analysis capabilities in a DSS.

**Multiple Choice Questions.**

1. _____models are used to support top managers strategic planning responsibilities.
   A. Strategic
   B. Tactical
   C. Operational
   D. Analytical

2. _____models are used mainly by middle managers to assist in allocating and controlling the organization's resources.
   A. Strategic
   B. Tactical
   C. Operational
   D. Analytical

3. _____models are used to support the day-to-day working activities of the organization.
   A. Strategic

B. Tactical

C. Operational

D. Analytical

4. _____models are used to perform analysis on data.

    A. Strategic

    B. Tactical

    C. Operational

    D. Analytical

5. The _____ is capable of inter-relating models with the appropriate linkages through a database.

    A. MBMS

    B. DBMS

    C. DSS

    D. KMS

6. _____ is the process of controlling the actual running of the model.

    A. Model integration

    B. Model execution

    C. Model base

    D. Model creation

7. _____ involves combining the operations of several models when needed or integrating the DSS with other applications.

    A. Model integration

    B. Model execution

    C. Model base

    D. Model creation

8. The user interface sub-system is managed by software called the _____.

    A. MBMS

    B. DBMS

    C. DSS

    D. UIMS

9. _____ continues to make inroads in improving DSS.

    A. Artificial intelligence

    B. ERP

    C. CRM

    D. SCM

10. _____sub-system can supply the required expertise for solving some aspects of the problem and provides knowledge that can enhance the operation of other DSS components.

    A. Knowledge based management

B. Model based management

C. Model directory

D. Model creation

11. _____software provides the necessary execution and integration of the intelligent system.

A. Knowledge based management

B. Model based management

C. Model directory

D. Model creation

**State True or False.**
1. The decision maker should be reactive.
2. User-friendliness, strong graphical capabilities, and a natural language interactive human machine interface can greatly increase the effectiveness of DSS.
3. The data management sub-system includes a database that contains relevant data for the situation and is managed by software called the DBMS.
4. The DSS components communicate via internet technology.
5. The internal data come mainly from the organization's transaction processing system.
6. The data directory is especially appropriate for supporting the intelligence phase of the decision making process by helping to scan data and identify problem areas or opportunities.
7. The role of the model directory is similar to that of a database directory.
8. The term user interface covers all aspects of communication between a user and the DSS or any MSS.
9. The UIMS is also called as the dialog generation and management system.
10. The actual DSS access is provided through web browsers, including voice input and output, portable devices, and direct sensing devices.

**Unit 3 : Group Support Systems and Enterprise Information Systems**

**Short Questions**
1. Define groupwork.
2. List five characteristics of groupwork.
3. Why do companies use computers to support groupwork?
4. What limitation do computers have in terms of supporting groupwork?
5. What is an integrated collaboration suite?
6. What is unique about Groove?
7. Define EMS.
8. List the steps of organizing a GDSS session.
9. List GroupSystems' major products.
10. List some success factors of GDSS/GSS.

11. List three implementation issues of GDSS/GSS.
12. Write the capabilities of groupware.
13. State the full form
14. Define :
   a. Collaborative workflow
   b. Wiki
   c. Wikilog
   d. Collaborative hub
   e. Corporate portal

**Long Questions.**

1. Describe the five process of groupwork.
2. Describe potential gains of group meetings.
3. Describe potential losses of group meetings.
4. Define and provide simple examples to three coordination levels in groupwork.
5. Describe the components of the time/place framework.
6. List the major groupware tools and divide them into synchronous and asynchronous types.
7. Describe the various types of electronic teleconferencing, including Web-based conferencing.
8. Describe whiteboards and screen sharing.
9. Describe instant video and the online workspace.
10. Describe Lotus Notes/Domino and its major capabilities.
11. Describe Microsoft's collaboration products.
12. Describe the process of renting a place for a virtual meeting, using companies such as WebEx.
13. Define GDSS and list the limitation of the initial GDSS software.
14. Define GSS and list its benefits.
15. How can a company create a collaborative culture?
16. Describe VoIP and list its advantages.
17. Explain why it is useful to describe groupwork in terms of the time/place framework.
18. Describe the kinds of support that groupware can provide to decision makers.
19. Explain why most groupware is deployed today over the Web.
20. Explain how idea generation works.

**Fill in the blanks.**

1. _____ refers to work done by two or more people together.
2. The members of a group can be in one place, meeting face to face, or they can be a _____, in which case they are in different places while in a meeting.
3. _____ are the benefits of working in groups.
4. The un-fortunate dysfunctions that may occur when people work in groups are called _____.
5. _____networked decision support can be effectively supported by an intranet.
6. A/An _____links people in different organizations.
7. _____provides a mechanism for team members to share opinions, data, information, knowledge, and other resources.
8. When information is sent and received almost simultaneously, the communication is_____.
9. _____communication occurs when the receiver gets the information at a different time than it was sent, such as an e-mail.
10. _____was the first widely used groupware that enables collaboration by letting user access and create shared information through specially programmed notes documents.
11. _____is a real time collaboration package that includes white-boarding, application sharing, remote desktop sharing, file transfer, text chat, data conferencing and desktop audio and video conferencing.
12. _____is a product from Groove which is an end user application for secure discussions, file sharing, projects, and meetings.
13. The _____tool is an open ended brainstorming tool that allows shared space members to build structured hierarchical lists of videos and concepts.
14. _____enhances collaboration on drawing and designs.
15. The _____ platform works across corporate firewalls and requires no special configuration or IT administration.
16. _____is pay per use groupware that provides a low cost, simplified way to hold electronic meetings over the web.

**Multiple choice Questions.**

1. _____MeetingRoom was one of the first comprehensive same time/same place electronic meeting packages.
   A. ThinkTank
   B. GroupSystems
   C. GDSS
   D. Groove Sketchpad
2. GroupSystems latest product is _____, which is a suite of tools that significantly shortens cycle time for brainstorming, strategic planning, product development, problem solving, requirements gathering, risk assessments, team decision makings, and other collaborations.
   A. ThinkTank

B. GroupSystems
C. GDSS
D. Groove Sketchpad

3. A _____ is an interactive computer based system that facilitates the solution of semi-structured or un-structured problems by a group of decision makers.
   A. ThinkTank
   B. GroupSystems
   C. GDSS
   D. Groove Sketchpad

4. GDSS provide structure to the planning process, which keeps the group on track, although some applications permit the group to use unstructured techniques and methods for _____.
   A. Idea generation
   B. Idea modification
   C. Idea creation
   D. None of the above

5. A _____ is any combination of hardware and software that enhances groupwork either in direct or in-direct support of decision making.
   A. ThinkTank
   B. GroupSystems
   C. GSS
   D. Groove Sketchpad

6. An_____ is a form of GSS that supports anytime/anyplace meetings.
   A. Electronic Meeting System
   B. Electronic Document System
   C. E-commerce
   D. Groove Sketchpad

7. _____settings range from a group meeting at a single location for solving a specific problem to virtual meetings conducted in multiple locations and held via telecommunication channels for the purpose of addressing a variety of problem types.
   A. ThinkTank
   B. GroupSystems
   C. GSS
   D. Groove Sketchpad

8. Specific features such as _____ and _____ produce improvement groupwork using GDSS.
   A. Parallelism and anonymity
   B. Parallelism and iconic

C. Parallelism and strategic

D. Strategic and mathematical

9. _____permit the group to use structured or un-structured techniques and methods.

   A. ThinkTank

   B. GroupSystems

   C. GDSS

   D. GSS

10. _____refers to communication systems that transmit voice calls over Internet Protocol based networks.

    A. VoIP

    B. Wiki

    C. GSS

    D. GDSS

11. _____refers to software products that address project oriented and collaborative types of processes.

    A. VoIP

    B. Wiki

    C. Collaborative workflow

    D. GDSS

12. A _____ is a piece of sever software available at a website that allows users to freely create and edit webpage content through a web-browser.

    A. VoIP

    B. Wiki

    C. Collaborative workflow

    D. GDSS

13. A _____is essentially a blog that allows everyone to participate as a peer.

    E. VoIP

    F. Wikilog

    G. Soft-bot

    H. Link-bot

**State True or False.**

1. A group can be permanent or temporary.
2. Many participants may be afraid to speak up, while a few may dominate the discussion.
3. Misunderstanding occurs through different interpretations of language, gesture, or expression.
4. A meeting of several managers or executives may cost thousands of dollars per hour in salary costs alone.
5. Many computerized tools have been developed to provide group support.
6. Modern web based information technologies provide an inexpensive, fast, capable, and

reliable means of supporting communications.
7. Web conferencing is much less expensive than video conferencing because it runs over the internet.
8. Microsoft Windows Meeting Space is a real time collaboration package that includes white-boarding, application sharing, remote desktop sharing, file transfer, text chat, data conferencing and desktop audio and video conferencing.
9. WebEx Meeting Center is pay per use groupware that provides a low cost, simplified way to hold electronic meetings over the web.
10. Groove is relatively inexpensive and provides easy to use and easy to set up collaboration for an organization.
11. Electronic meeting services such as WebEx Meeting Center, PlaceWare Conference Center, and Verizon Conferencing enable anyone to hold a meeting for a rental fee.
12. GDSS support parallel processing of information and idea generation.
13. ThinkTank is a web 2.0 application for group collaboration.
14. The success of a GSS depends mostly on its results.
15. VoIP is also known as Internet telephony.
16. Lowers total cost of ownership through voice/data convergence.
17. Wikis come in many shapes and formats, one of which is a Wikilog.

**Unit 4 : Intelligent Decision Support Systems**

**Short Questions.**
1. Distinguish between knowledge and data.
2. Define tacit knowledge and explicit knowledge.
3. Define knowledge management.
4. Define knowware.
5. Define EKP.
6. List the major systems that are frequently integrated with KMS.
7. Why is the term knowledge so difficult to define?
8. What is the role of a knowledge repository in knowledge management?
9. What is the reason for cycle in functioning KMS?
10. List the three sets of technologies used in KMS.
11. What do you understand by communication technologies in KMS?
12. What do you understand by collaboration technologies in KMS?
13. What do you understand by storage and retrieval technologies in KMS?
14. List some technologies that have contributed to significant advances in KM tools.
15. Which are the AI methods used in KMS?
16. What is an intelligent agent?
17. Give two examples of intelligent agent.
18. Which tasks are included in knowledge discovery in databases?
19. Define model marts.
20. Define model warehouses.
21. Write the use of XML technology for supporting knowledge management.

22. Which tools are included in knowledge management software packages?
23. What do you understand by collaborative computing tools?
24. What does knowledge servers contains? Give the examples of knowledge server.
25. What is meant by enterprise knowledge portals?
26. What is meant by electronic document management?
27. List the examples of EDM.
28. What is meant by CMS?
29. What is meant by tacit knowledge system's knowledge mail?
30. What is meant by knowledge management suites?
31. Define knowledge engineering.
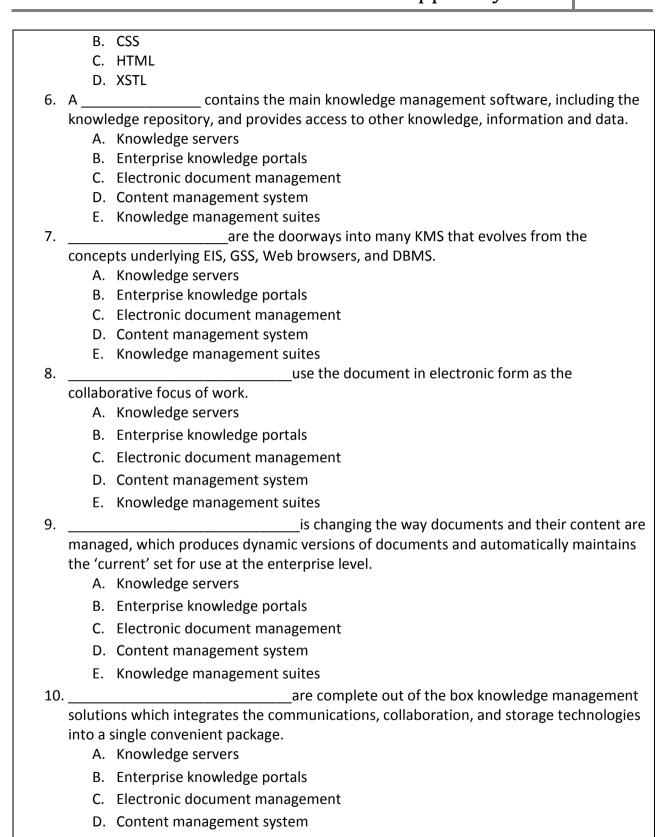32. What do you understand by knowledge acquisition?

**Long Questions.**
1. Define knowledge management and describe its purpose.
2. Write the characteristics of knowledge.
3. Describe the knowledge-based economy.
4. Define KMS and describe the capabilities of KMS.
5. Describe the KMS cycle.
6. List and describe the components of KMS.
7. Describe how AI and intelligent agents support knowledge management.
8. Relate XML to knowledge management and to knowledge portals.
9. Describe the major categories of knowledge management tools.
10. Define EDM and relate it to knowledge management and to CMS.
11. Describe tools for knowledge harvesting.
12. Compare and contrast tacit knowledge and explicit knowledge.
13. Explain why it is important to capture and manage knowledge.
14. Write a short note on knowledge management consulting firms.
15. Explain knowledge engineering along with the major activities.
16. Explain the concept of knowledge acquisition along with the methods used for it.

**Fill in the blanks.**
1. _____ is the systematic and active management of ideas, information, and knowledge residing in an organization's employees.
2. _____are facts, measurements and statistics.
3. _____is organized or processed data that is timely and accurate.
4. _____ is information that is contextual, relevant, and actionable.
5. _____knowledge deals with more objective, rational, and technical knowledge.
6. _____knowledge is usually in the domain of subjective, cognitive, and experimental learning.
7. Explicit knowledge is also known as _____.

8. Tacit knowledge is also known as _____.
9. _____ refers to the use of modern IT to systematize, enhance and expedite intra and inter-firm KM.
10. A _____ stores knowledge that is often text based and has very different characteristics.
11. The two primary functions of IT in knowledge management are _____ and _____.
12. A functioning KMS follows _____ steps in a cycle.
13. _____ technologies allow users to access needed knowledge and to communicate with each other – especially with experts.
14. _____ technologies provide the means to perform groupwork.
15. _____ technologies originally meant using a database management system (DBMS) to store and manage knowledge.
16. _____ methods and tools are embedded in a number of KMS, either by vendors or by system developers.

**Multiple Choice Questions.**

1. _____ are software systems that learn how users work and provide assistance in their daily tasks.
   A. Intelligent agents
   B. Software agents
   C. DSS agents
   D. Multi-agent
2. _____ is a process used to search for and extract useful information from volumes of documents and data.
   A. Knowledge discovery in databases
   B. Knowledge management system
   C. Idea generation
   D. Reality mining
3. _____ are analogous to data marts.
   A. Model marts
   B. Model database
   C. Model repository
   D. Model warehouses
4. _____ are analogous to data warehouses.
   A. Model marts
   B. Model database
   C. Model repository
   D. Model warehouses
5. _____ enables standardized representations of data structures so that data can be processed appropriately by heterogeneous systems without case by case programming.
   A. XML

B. CSS
C. HTML
D. XSTL

6. A _____ contains the main knowledge management software, including the knowledge repository, and provides access to other knowledge, information and data.
   A. Knowledge servers
   B. Enterprise knowledge portals
   C. Electronic document management
   D. Content management system
   E. Knowledge management suites

7. _____are the doorways into many KMS that evolves from the concepts underlying EIS, GSS, Web browsers, and DBMS.
   A. Knowledge servers
   B. Enterprise knowledge portals
   C. Electronic document management
   D. Content management system
   E. Knowledge management suites

8. _____use the document in electronic form as the collaborative focus of work.
   A. Knowledge servers
   B. Enterprise knowledge portals
   C. Electronic document management
   D. Content management system
   E. Knowledge management suites

9. _____is changing the way documents and their content are managed, which produces dynamic versions of documents and automatically maintains the 'current' set for use at the enterprise level.
   A. Knowledge servers
   B. Enterprise knowledge portals
   C. Electronic document management
   D. Content management system
   E. Knowledge management suites

10. _____are complete out of the box knowledge management solutions which integrates the communications, collaboration, and storage technologies into a single convenient package.
    A. Knowledge servers
    B. Enterprise knowledge portals
    C. Electronic document management
    D. Content management system
    E. Knowledge management suites

**State True or False.**
1. Knowledge management is a process that helps organizations identify, select, organize, disseminate, and transfer important information and expertise that are part of the organization's memory and that typically reside within the organization in an unstructured manner.
2. The structuring of knowledge enables effective and efficient problem solving, dynamic learning, strategic planning and decision making.
3. Knowledge is very distinct from data and information.
4. The data, information and knowledge may all be viewed as assets of an organization.
5. Knowledge is dynamic, it is information in action.
6. The term intellectual capital, often used as a synonym for knowledge, implies that there is a financial value to knowledge.
7. Networks facilitate collaboration in KM.
8. KMS are developed using three sets of technologies: communication, collaboration, and storage and retrieval.
9. Technology tools that support KM are called Knowware.

## Unit 5 : Intelligent Systems over the Internet

**Short Questions.**
1. Define intelligent agents.
2. List out the different categories of agents.
3. List out the components of intelligent agents.
4. What is web based intelligent system?
5. Define mobile agents.
6. List the characteristics of intelligent agents.
7. Define homeostatic goal.
8. Using which communication languages and standards intelligent agents communicates and collaborates (interactivity)?
9. In which two ways intelligent agents can be classified?
10. Define agency.
11. Define intelligence.
12. Define mobility.
13. In which dimensions non-mobile agents and mobile agents are defined?
14. Define email agent (mail-bots).
15. Define intelligent search agent.
16. Define internet soft-bot.
17. Define e-commerce agent.
18. List 5 types of DSS agent.
19. What is DSS agent?
20. What is multi-agent?
21. Define semantic web.

22. Write the 4 layers of web services.
23. Define ontology.
24. Give full form of URI, RDF.
25. What is web based recommendation system?
26. Write 2 major functions of web based recommendation system.

**Long Questions.**

1.  Define intelligent agents. Why are there so many different definitions and names for intelligent agents?
2.  What are the main features of intelligent agents?
3.  List and briefly comment on different categories of agents.
4.  Describe the differences between software agents and intelligent agents.
5.  Explain web based intelligent agents with its usage and types.
6.  Explain the features of intelligent agents.
7.  Write the characteristics of intelligent agents.
8.  Explain the classification of intelligent agents.
9.  Write short note on types of intelligent agents.
10. Write the 9 applications where internet based software agents are used?
11. Write short note on internet based software agents.
12. Write short note on semantic web representing knowledge for intelligent agents.
13. Write advantages, limitations and applications of semantic web.
14. Explain web based recommendation systems.

**Fill in the blanks.**

1.  An_____ is an autonomous computer program that observes and acts upon an environment and directs its activity toward achieving specific goals.
2.  _____are able to perceive their environment and respond in a timely fashion to changes that occur in it in order to satisfy their design objectives.
3.  An agent has _____; that is, it is capable of acting on its own or of being empowered.
4.  _____ agents execute tasks on behalf of a business process or computer application.
5.  _____agents perform tasks on behalf of individual users.
6.  A _____ agent works for only one user who creates it.
7.  _____agents are created by a designer for the use of anybody who has access to the application, network, or database.
8.  Most Internet and e-commerce agents do not exhibit these characteristics, at least not at the level that they are expected. So they are often called _____agents.
9.  _____ is the degree of autonomy and authority vested in an agent and can be measured, at least qualitatively, by the nature of the interaction between the agent and other entities in the system.

10. _____ is the degree of reasoning and learned behavior; it is an agent's ability to accept the user's statement of goals and carry out the tasks delegated to it.
11. _____ is the degree to which agents themselves travels through a network.
12. _____ scripts can be composed on one machine and shipped to another for execution in a suitably secure environment.
13. _____ agents can be defined by two dimensions, intelligence (x-axis) and agency (y-axis).
14. _____ agents are defined in a three-dimensional space (mobility z-axis).

**Multiple Choice Questions.**

1. _____ agents take a request and navigate to the appropriate page on a website, locate the required information, and return it as an XML document for processing by another agent.
   A. Informational
   B. Monitoring
   C. Recommendation
   D. DSS

2. _____ agents are built on top of the information agent to keep track of previously returned results.
   A. Informational
   B. Monitoring
   C. Recommendation
   D. DSS

3. _____ agents assist in customization and personalization services that are critical to maintaining good customer relationships.
   A. Informational
   B. Monitoring
   C. Recommendation
   D. DSS

4. _____ agents controls unsolicited e-mail and alerts user by voice if a designated message arrives.
   A. Informational
   B. Multi
   C. DSS
   D. Internet based software

5. There are _____ types of DSS agent.
   A. five
   B. six
   C. four
   D. two

6. _____ is system with multiple co-operating software agents.
   A. Informational

B. Multi-agent

C. DSS

D. Internet based software

7. A _____ is a multiple-agent system for problem solving. Splitting of a problem into multiple cooperating systems in deriving a solution.

    A. Semantic web services

    B. Web services

    C. Artificial intelligence

    D. Distributed Artificial Intelligence

8. The _____is meant to enable an environment in which independent, Internet-connected information systems can exchange knowledge and action specifications, resulting in the execution of an activity acceptable to all systems involved.

    A. Semantic web

    B. Web services

    C. Local web services

    D. Global web services

9. _____ is an XML-based technology that allows software components to be integrated more flexibly through dynamic communication. It has gained much support from most major software companies such as IBM, Microsoft, and Sun Microsystems.

    A. Semantic web services

    B. Web services

    C. Local web services

    D. Global web services

10. There are _____layers of web services.

    A. four

    B. five

    C. six

    D. two

11. _____is a set of terms related to a knowledge domain, including the vocabulary, the semantic interconnections, and some simple rules of inference and logic for some particular topics.

    A. Ontology

    B. Taxonomy

    C. Demographic filtering

    D. Text filtering

12. _____is an extension of XML that allows semantic information to be represented in Web services.

    A. Semantic web services

B. Content web services

C. Local web services

D. Global web services

13. _____ is a method for generating recommendations from user profile. It uses preferences of other users of similar behavior to predict the preference of the particular user.
   A. Collaborative filtering
   B. Content based filtering
   C. Demographic filtering
   D. Text filtering

14. _____is a method that recommends items for the user based on the description of previously evaluated items and information available from the content (such as keywords).
   A. Collaborative filtering
   B. Content based filtering
   C. Demographic filtering
   D. Text filtering

15. _____ is a method that uses the demographic data of the user to determine which item may be appropriate for recommendation.
   A. Collaborative filtering
   B. Content based filtering
   C. Demographic filtering
   D. Text filtering

**State True or False.**
1. The term agent is derived from the concept of agency.
2. Intelligent agents are able to exhibit goal-directed behavior by taking the initiative in order to satisfy their design objectives.
3. Intelligent agents are capable of interacting with other agents in order to satisfy their design objectives.
4. Intelligent agents must have control over their own actions and be able to work and launch actions independently of the user or other actors.
5. Intelligent agents must learn from their experiences to continually get better at achieving their design objectives.
6. For an agent to be effective, it must develop its own personality much the same way that human agents do, so that they are believable and capable of interacting with human users.

| Unit 6 : Decision Support Horizon and Emerging Trends |
|---|

**Short Questions.**
1. What is RFID?
2. What does RFID system consists of?
3. Define active tags.
4. Define passive tags.
5. State difference between active tags and passive tags.
6. What kinds of data are read / recorded through RFID?
7. Which is the most commonly used data representation for RFID technology?
8. What does EPC consists of?
9. State the full form of UPC, EPC, and SGTIN.
10. Define reality mining.
11. What types of data are used in reality mining?
12. What is meant by sense networks?
13. Define city-sense.
14. Define tribes.
15. Give the name and usage of an application platform developed by sense networks for reality mining.
16. What is a virtual world?
17. List the current popular virtual worlds.
18. Define avatars.
19. Define trade-show.
20. What is virtual community?
21. List the types of virtual communities.
22. State the difference between public and private communities.
23. State the difference between internal and external communities.
24. What is the purpose of competitive intelligence system reports and queries?

**Long Questions.**
1. What can a company learn by reading RFID at a distribution center?
2. Search online for applications of RFID in health care, entertainment, and sports.
3. Briefly describe how the data are used to create profiles of users.
4. What other applications can you imagine if you were able to access cell phone location data? Do a search on location-enabled services.
5. Write short note on reality mining.
6. Explain the concept of RFID.
7. What are the advantages and disadvantages of providing decision support through virtual worlds?
8. What activities of a physical tradeshow can be experienced in a virtual event? Which

ones cannot be replicated?

9. What types of data analysis might you perform on data about users in a specific virtual –world setting?

10. Explain various types of virtual communities.

11. State the characteristics of virtual community.

12. Explain the elements of interaction in a virtual community.

13. Describe the role of competitive intelligence system.

14. Discuss dashboard as a decision support tool.

15. Explain competitive intelligence systems.

16. What is information visualization? Describe any one related application of visualization technologies.

**Fill in the blanks.**

1. _____is a generic technology that refers to the use of radio frequency waves to identify objects.

2. A _____is an electronic chip attached to the product to be identified.

3. A/An _____ (i.e., reader) with one or more antennae attached.

4. A/A_____ to manage the reader and store the data captured by the reader.

5. _____tags receive energy from the electromagnetic field created by the interrogator (e.g., a reader) only when it is requested. The passive tag will remain energized only while it is within the interrogator's magnetic field.

6. _____tags have a battery on board to energize them; instead they can initiate the data transmission process on their own.

7. The most commonly used data representation for RFID technology is the_____, which is viewed by many in the industry as the next generation of the Universal Product Code (UPC).

8. The _____consists of a series of numbers that identifies product types and manufacturers across the supply chain.

9. RFID tags contain 96 bits of data in the form of_____.

10. One of the applications of the massive amounts of data that are generated by RFID is in_____.

11. RFID can also be used by companies to improve either the _____or_____ of various existing processes by incremental process change.

12. The_____ identifies aggregate patterns of human activity trends.

13. By analyzing and learning from these large-scale patterns of movement, it is possible to identify distinct classes of behaviors in specific contexts, called_____.

14. Macrosense is an application platform developed by_____ that takes the data being generated by all mobile devices and after spatial and time based cleaning, applies proprietary clustering algorithms to massive datasets to classify the incoming data streams as belonging to different types of customers.

15. Sense Networks is adapting general technology to help consumers to find people with similar application called _____.
16. _____are defined as artificial worlds created by computer systems in which the user has the impression of being immersed.
17. _____intention is to achieve a feeling of telepresence and participation from a distance.
18. _____is only one of numerous terms describing a temporary market event, held at some interval, where a large number of potential buyers (attendees) and sellers (exhibitors) interact for the purpose of learning about new goods and services.
19. A _____group of people with common interests who interact with one another over a computer network, mainly the internet.

**Multiple Choice Questions.**

1. The concept of a _____ of information has been proposed by analogy with other types of dashboards (e. g., a dashboard in a motorcar, the control room in a plant) to promote the development of very practical types of information systems that have a direct impact on key managerial activities, for instance, decision making and monitoring as well as group activities, such as collaboration.
   A. dashboard
   B. digital dashboard
   C. criminal analysis
   D. balanced score-card

2. A _____, also known as an enterprise dashboard or executive dashboard, is a business management tool used to visually discover the status (or "health") of a business enterprise via key business indicators. Digital dashboards use visual, at-a-glance displays of data pulled from disparate business systems to provide warnings, action notices, next steps, and summaries of business conditions.
   A. dashboard
   B. digital dashboard
   C. criminal analysis
   D. balanced score-card

3. _____have been proposed as one method to provide unlimited data from a multitude of sources to a dashboard of information.
   A. Dashboard
   B. Digital dashboard
   C. Criminal analysis
   D. Data warehouses

4. _____, when questions and answers are known and answers are monitored over time with the use of tightly restricted models that represent previous decisions and ways to resolve them.
   A. Reporting
   B. Discovering
   C. Scrutinizing

D. Analyzing

5. _____, where questions are known in broad terms, but are still difficult to ask precisely using incomplete models.
    A. Reporting
    B. Discovering
    C. Scrutinizing
    D. Analyzing

6. _____, where questions are not even known at a specific level, in a complete absence of a model, or indeed even of a specific problem to solve.
    A. Reporting
    B. Discovering
    C. Scrutinizing
    D. Analyzing

7. The development of the _____ thus becomes an iterative process where problems and their representations improve over time and where discovery turns into scrutiny and scrutiny turns into reporting over time.
    A. Dashboard
    B. Digital dashboard
    C. Criminal analysis
    D. Data warehouses

8. _____systems help decision makers identify opportunities to improve the company or organization's strategic position among competitors, customers, and suppliers.
    A. Artificial intelligence
    B. Competitive intelligence
    C. Distributed artificial intelligence
    D. Data warehouses

9. _____is the process of monitoring the environment to help decision makers identify either problems to address or opportunities to exploit to improve their position.
    A. Artificial intelligence
    B. Competitive intelligence
    C. Distributed artificial intelligence
    D. Data warehouses

10. _____can be programmed to find new mentions of products, companies, patents, people, or other information.
    A. Web crawlers
    B. Competitive intelligence
    C. Distributed artificial intelligence

D. Data warehouses

11. _____tools facilitate analyses because users can define criteria for examining those data. Users can employ filters based upon specific qualifying criteria, such as changes in suppliers or customers.
    A. Data mining
    B. Data analysis
    C. Data storing
    D. Data warehouses

12. _____ produces (interactive) visual representations of abstract data to reinforce human cognition; thus enabling the viewer to gain knowledge about the internal structure of the data and causal relationships in it.
    A. Information visualization
    B. Information security
    C. Data analysis
    D. Data warehouses

13. _____is a method commonly used to represent the content of a document by means of a vector of key terms.
    A. Automatic indexing
    B. Information extraction
    C. Data classification
    D. Data clustering

14. _____is another way to identify useful information from text documents automatically.
    A. Automatic indexing
    B. Information extraction
    C. Data classification
    D. Data clustering

15. _____assigns objects into predefined categories, whereas clustering group's objects into categories dynamically based on their similarities.
    A. Automatic indexing
    B. Information extraction
    C.  Classification
    D. Clustering

16. _____technologies map abstract semantic structures into visual objects that can be displayed on a computer screen.
    A. Automatic indexing
    B. Information extraction
    C. Information representation
    D. Data clustering

**State True or False.**

1. RFID is a new member of the automatic identification technologies family, which also include the ubiquitous barcodes and magnetic strips.
2. The retail supply chain has primarily been interested in using passive RFID tags.
3. Active tags are most frequently found in defense or military systems, where tags are linked to a prepaid account, enabling drivers to pay tolls by driving past a reader rather than stopping to pay at a tollbooth.
4. The EPC also includes an extra set of digits to uniquely identify items.
5. Sense Networks core analytical platform, Macrosense is able to analyze the aggregate information shown in Citysense to cluster users and identify tribes.
6. Virtual worlds have existed for long time in a various forms, including stereoscopes, Cinerama (a trademark used for a motion-picture process designed to produce wide-screen images.), simulators, computer games, and head mounted displays (pair of goggles or a full helmet.).
7. Second Life can be an effective business tool.
8. Tradeshow such as book shows, technology shows and human resource shows (career fairs).
9. A virtual community is a social network organized around a common interest, idea, task, or goal.