MIDTERM EXAMINATION

CS507- Information Systems (Session - 2)

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Question No: 1 (Marks: 1) - Please choose one
Medium size organizations usually have simple management structure than those of small organizations.

True
False

Reference & Explanation:
Page # 17, lecture # 03
Small organizations usually have simple management structure.

Question No: 2 (Marks: 1) - Please choose one
Information should be tailored in accordance with the organization's culture and structure.
True
False

Reference & Explanation:
Page # 23, lecture04
Information should be tailored in accordance with the organization's culture and structure.

Question No: 3 (Marks: 1) - Please choose one
---------- needs data preparation which may involve filtering data and data transformations, selecting subsets of records.
Model Building
Deployment
Exploration

Reference & Explanation:
Page # 47, lecture # 11
Exploration – includes data preparation which may involve filtering data and data transformations, selecting subsets of records.

Question No: 4 (Marks: 1) - Please choose one
Decision making is the cognitive process of selecting a course of action from among --------- alternatives
Multiple
Double
Triple

Reference & Explanation:

Page # 69, lecture # 15
Decision making is the cognitive process of selecting a course of action from among multiple alternatives.

Question No: 5 (Marks: 1) - Please choose one
The study of business problem domain used to recommend improvements and specify the business Requirements for the solution is called:
System Analysis
System Design
Risk Management
Risk Analysis

Reference & Explanation:
Page # 102, lecture # 22
System analysis can be defined simply as: "The study of business problem domain to recommend improvements and specify the business requirements for the solution."

Question No: 6 (Marks: 1) - Please choose one
In which of the following Models it is Difficult to convince some customers that the evolutionary approach is controllable
Spiral
WaterFall
Incremental
Iterative

Reference & Explanation:
Page # 99, lecture # 21
SPIRAL is an iterative approach to system development. The spiral lifecycle model is a combination of the classic waterfall model and aspects of risk analysis. This model is very appropriate for large and complex Information Systems. The spiral model emphasizes the need to go back and reiterate earlier steps a number of times as the project progresses.
Weaknesses:
• *Difficult to convince some customers that the evolutionary approach is controllable*
• Needs considerable risk assessment
• If a risk is not discovered, problems will surely occur

Question No: 7 (Marks: 1) - Please choose one
Partial systems are successively built to produce a final total system in the following model:
WaterFall
RAID
Iterative Model
Incremental Model

Reference & Explanation:
Page # 95, lecture # 20

The incremental model is a method of software/ Information System development where the model is designed, implemented and tested incrementally until the product is finished. It involves both development and maintenance.

Characteristics of the Incremental Model

• The system development is broken into many mini development projects
• *Partial systems are successively built to produce a final total system.*
• Highest priority requirements tackled early on.
• Once an incremented portion is developed, requirements for that increment are frozen.

Question No: 8 (Marks: 1) - Please choose one

Decision making is the cognitive process of selecting a course of action from among multiple alternatives

True

False

Reference & Explanation:

Page # 69, lecture # 15

Decision making is the cognitive process of selecting a course of action from among multiple alternatives.

Question No: 9 (Marks: 1) - Please choose one

Using a decision support system involves an interactive analytical modeling process

True

False

Explanation:

Decision Support Systems

Using a decision support system for laws drafting involves an interactive analytical modeling process. For example, using a DSS software package for decision support may result in a series of displays in response to alternative what-if changes entered by court personnel. This differs from the demand responses of information reporting systems, since the personnel are not demanding pre-specified information. Rather, they are exploring possible alternatives. Thus, they do not have to specify their information needs in advance. Instead, they use the DSS to find the information they need to help them make a decision. That is the essence of the decision support system concept.

Using a decision support system involves four basic types of analytical modeling activities: (1) what-if analysis, (2) sensitivity analysis, (3) goal-seeking analysis, and (4) optimization analysis, let's briefly look at each type of analytical modeling that can be used for decision support.

Question No: 10 (Marks: 1) - Please choose one

Source of information is generally categorize in primary, secondary and _____

Proximity

Initially

Tertiary

Reference & Explanation:

Page # 11, lecture # 01
Sources of information are generally categorized as primary, secondary or tertiary depending on their originality and their proximity to the source or origin.

Question No: 11 (Marks: 1) - Please choose one
Commentaries are the example of _____ sources.
Primary
Tertiary
Secondary

Reference & Explanation:
Page # 13, lecture # 01
Some examples of secondary sources:
1. bibliographies (may also be tertiary)
2. biographical works
3. commentaries
4. dictionaries and encyclopedias (may also be tertiary)
5. dissertations or theses (more usually primary)
6. handbooks and data compilations (may also be tertiary)
7. history

Question No: 12 (Marks: 1) - Please choose one
Board of Directors are elected from _____
Employees
Customers
Share holders

Reference & Explanation:
http://en.wikipedia.org/wiki/Board_of_directors
In most legal systems, the appointment and removal of directors is voted upon by the shareholders in general meeting.
Question No: 13 (Marks: 1) - Please choose one
_____ is a group of elements that are integrated with common purpose of objective.
Procedure
System
Firm

Reference & Explanation:
Page # 13, lecture # 01
A system is a group of elements that are integrated with the common purpose of achieving an objective.
Question No: 14 (Marks: 1) - Please choose one
Word Processing is an example of the following system:
Office automation system
Decision support system
Word processing

Reference & Explanation:
Page # 43, lecture # 10
Office Automation Systems
Office automation system includes formal and informal electronic systems primarily concerned with the communication of information to and from persons both inside and outside the firm. It supports data workers in an organization.
For Instance
• Word processing
• Desktop publishing
• Imaging & Web publishing
• Electronic calendars – manager's appt. calendars
• Email
• Audio & video conferencing – establishing communication between geographically dispersed persons.

Question No: 15 (Marks: 1) - Please choose one
_____ is known as father of warehouse.
Stephen hawking
Bill gates
Bill Inmon

Reference & Explanation:
http://www.intranetjournal.com/features/datawarehousing.html

The term Data Warehouse was coined by Bill Inmon in 1990, which he defined in the following way: "A warehouse is a subject-oriented, integrated, time-variant and non-volatile collection of data in support of management's decision making process". He defined the terms in the sentence as follows:

Question No: 16 (Marks: 1) - Please choose one
The Iterative model emphasizes the need to go back and reiterate earlier steps a number of times as the project progresses.
True
False
Question No: 17 (Marks: 1)
Environment is a collection of different elements. List them.
Reference & Explanation:
Page # 24, lecture # 5
Elements of Environment
It is a collective reference made to the following factors
• Legal
• Ethics
• Economic
• Social
• Technological
Question No: 18 (Marks: 1)

Enlist the categories of the Support system

Reference & Explanation:

Page # 43, lecture # 10

Seeing the benefits of MIS for middle level managers, Computerised systems have been devised for other employees in the organization to help them complete their work efficiently and effectively.

Support systems can be classified into two categories

- Office automation systems
- Decision support systems

Question No: 19 (Marks: 2)

Identify any two reasons to use Incremental Models.

Question No: 20 (Marks: 3)

Define CAD?

Reference & Explanation:

Page # 63, lecture # 13

Computer Aided Design (CAD)

"It is a system that enables drawings to be constructed on a computer screen and subsequently stored, manipulated and updated electronically."

The ability to rotate or create movement in the design allows testing for clearances and frequently reduces the cost of prototyping the products. The technology is used for a wide variety of products in such fields as architecture, electronics, and aerospace, naval, and automotive engineering. Although CAD systems originally merely automated drafting, they now usually include three-dimensional modeling and computersimulated operation of the model. Rather than having to build prototypes and change components to determine the effects of tolerance ranges, engineers can use computers to simulate operation to determine loads and stresses. For example, an automobile manufacturer might use CAD to calculate the wind drag on several new car-body designs without having to build physical models of each one. In microelectronics, as devices have become smaller and more complex, CAD has become an especially important technology.

Among the benefits of such systems are lower product-development costs and a greatly shortened design cycle. While less expensive CAD systems running on personal computers have become available for do-ityourself home remodeling and simple drafting, state-of-the-art CAD systems running on workstations and mainframe computers are increasingly integrated with computer-aided manufacturing systems.

Question No: 21 (Marks: 5)

Discuss the attributes on which Organizational Information Requirements depends

Reference & Explanation:

Page # 17, Lecture 03

Organization & Information Requirements

Organizations have various attributes which distinguish them from each other. No two organizations are similar in all respects. There have to have certain distinctive lines keeping them unique from each other. Information requirements keep varying in accordance with

- Size of organization
- Its structure
- The Culture it follows
- Decision Making Structures
- Interested parties both internal and external

An organization should consider the above mentioned requirements while devising a system which tailors for specific information needs.

Question No: 22 (Marks: 10)

What are the components of the Expert System and how they are different from the neural network?

Reference:

Page # 50-51, Lecture # 11

Components of an Expert System

There are four main components of Expert systems

• User Interface: to enable the manager to enter instructions and information into an expert system to receive information from it.

• Knowledge Base: it is the database of the expert system. It contains rules to express the logic of the problem.

• Inference engine: it is the database management system of the expert system. It performs reasoning by using the contents of the knowledge base.

• Development engine – it is used to create an expert system.

Neural Network

Hardware or software that attempt to emulate the processing patterns of the biological brain. It is a device, modeled after the human brain, in which several interconnected elements process information simultaneously, adapting and learning from past patterns.

Neural Network vs. Expert System

Expert systems seek to model a human expert's way of solving problems. They are highly specific to seeking solutions. Neural networks do not model human intelligence. They seek to put intelligence into the hardware in the form of generalized capability to learn.