INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Dec 2013

Post Graduate Diploma in Materials Management

Paper 18.B

DECISION SUPPORT SYSTEM

Date: 21.12.2013 **Max. Marks 100**

Time: 2.00 p.m. to 5.00 p.m. **Duration 3 hours**

Instructions:

1. From part "A" answers all questions (compulsory). Each sub-question carries 1 mark. **Total marks = 32.**
2. From part "B" answers any three questions out of 5 questions. Each question carries 16 marks. **Total marks =48**.
3. Part "C" is a case study (compulsory). **Total marks = 20**

PART A (32 x1 = 32 marks)

Que 1. Expand the following

1. DSS
2. EDP
3. MIS
4. NOS
5. CRM
6. CBIS
7. GDSS
8. VBA

Que 2. Fill in the blanks

1. ------- is a broad term indicating any type of activity that attempts to imitate an exciting system or situation in a simplified manner.
2. ROMC stands for representations, operations, memory and -------
3. -------- is the estimation of the value of a variable (or set of variables) at some future point in time.
4. ------- Driven DSS model is a decision support system which uses special rules stored in a computer or used by a human to determine whether a decision should be made.
5. The process of decomposing and formalizing a problem is often called ---------
6. A typical Expert Systems (ES) generally consists of ------ components.
7. ------- is a sequence of user actions that is recorded and can be played back later to duplicate the original actions.
8. A data warehouse is a relational database that is designed for ------ rather than for transaction processing.

Que 3. Match the following

1.	Decision Tree	a) Copy Management or Replication management
2.	DSS Tool	b) Regression Method
3.	Forecasting Problems	c) Statistical Analysis Language
4.	S-PLUS	d) Data bank for the DSS
5.	DBMS	e) Decision-making theory
6.	Sampling	f) Data about data
7.	Metadata	g) Data reduction technique
8.	Data Staging	h) COBOL

Que 4. Find True or False of the following

1. Model represents a way of looking at the world, a shared set of assumptions that enable us to understand or predict behavior.
2. Excel is a spreadsheet program which is a powerful application that provides a wide range of tools for the manipulation, analysis, and display of data.
3. DSS Generator is a package of related hardware and software which provides a set of capabilities to quickly and easily build a specific SDSS.
4. A passive decision support system actually posses data and explicitly shows solutions based upon that data.
5. A data warehouse is the main repository of an organization's historical data, its corporate memory.
6. Clustering techniques consider data tuples as object.
7. Stand-alone Expert systems (ESs) is a computer-based support system that is embedded within ES or ES (interface) technology.
8. Histogram use binning to approximate data distributions and are a popular form of data reduction.

PART B 48 marks

(Answer any three. Each question carries 16 marks)

Que 5: a) What are the steps of decision-making process?

b) Explain decision tree with example.

Que 6: a) What are the advantages and limitations of decision support system?

b) Write short note on artificial intelligence.

Que 7: a) Write short note on DBMS

b) Describe the components of DSS?

Que 8: a) What are the benefits of GDSS?

b) What are the factors that affect GDSS?

Que 9: a) What is data warehouse? Explain the architecture of Data Warehouse in details.

b) What is data mining? Explain the role of data mining.

PART C 20 marks

Ques. 10 Below data for analysis includes the attribute age. The age value for the data tuples are (in increasing order):

12, 14, 15, 16, 19, 20, 20, 21, 21, 22, 23, 24, 25, 25, 30, 32, 33, 34, 34, 35, 35, 36, 40, 45, 47, 55, 75.

a) Use min-max normalization to transfer the value 35 for age on to the range (0.0, 1.0).

b) Use z-score normalization to transfer the value 35 for age, where the standard deviation of age is 12.94 years.

c) Comment on which method you would prefer to use for the given data & why?

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