INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Paper 18.B
DECISION SUPPORT SYSTEM

Dec 2012

Date: 15.12.2012   **Max. Marks 100**
Time: 2.00 p.m. to 5.00 p.m.   **Duration 3 hours**

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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**

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PART A   (1 x32 = 32 marks)

Q. 1. Expand the following

    1. DSS

    2. EDP

    3. GDSS

    4. MIS

    5. SAS

    6. OLTP

    7. TCO

    8. CRM

Q. 2. Fill in the blanks

    1. ------- analysis helps to assess the potential and suitability of the of a

        market

    2. --------refers to the system which attempt to formalize domain knowledge

        so that it is amenable to mechanized reasoning.

    3. AI stands for --------

    4. Decision support system are a -------of computer - based information

        system

    5. A DBMS serves as a ------- for the DSS

    6. Expert Systems (ESs) are an -------- of DSSs

    7. A ------ is a sequence of user actions that is recorded and can be played

        back later to duplicate the original actions.

8. A data -------- is the main repository of an organization's historical data, its corporate memory.

Q. 3. Match the following

1. Artificial Intelligence	a) Essential part of Excel programming
2. Data Mart	b) Technique to enhance the support capabilities of the DSS
3. VBA	c) Department subset of a data warehouse
4. Delpi Technique	d) data smoothing techniques
5. Meta Data	e) Qualitative Methods
6. Binning	f) Data about data
7. K-L Method-	g) Sometimes called data or knowledge discovery
8. Data Mining	h) Principle Components Analysis (PCA)

Q. 4. Find True or False of the following

1. EDP is the first of several link of the data-to-information chain by which we merely access, store, retrieve and manipulate data
2. A data warehouse is a rational database that is designed for query and analysis rather than for transaction processing
3. Passive decision support system actually processes data and explicitly shows solutions based upon that data.
4. MIS was coined to represent a more-useful, higher level form of management support using information rather than just data
5. Mathematically a model consists of variables and a specification of interactions among them.
6. A typical ES generally consist of five components
7. The difference between GDSSs and DSSs is the focus on the group versus the individual decision – maker.
8. The OLTP system stores only historical data as needed to successfully meet the requirements on the current transaction.

Q.5. a) Write short note on VBA.

b) What is macro? Describe it.

Que.6 Write short notes on (any two) (8+8)

1) a) OLAP

b) DSS Tools

2) a) Decision Making Tree

b) Wavelet Transformation

3) a) Histograms

b) SPSS

4) a) Component of DSS

b) DBMS

Que.7 a) Describe data warehouse architecture in detail

b) What is Data Mining? Describe the architecture of data mining

Que.8 a) What are the components of GDSS? What are the factors that affect GDSS?

b) Write short notes on Principle Components Analysis

Que.9 Distinguish between

a) EDP versus MIS

b) OLTP versus Data Warehouse

Que. 10: **SECTION C**   (Case Study)   **20 marks**

Suppose that the data for analysis include the attribute age. The age value for the data tuples are (in increasing order):

13,15,16,1619,20,20,21,22,22,25,25,25,25,30,33,33,35,35,35,35,36,40,45,46,52,70.

  a) Use min-max normalization to transform the value 35 for age onto the range (0.0, 1.0).
  b) Use z-score normalization to transform 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 and why?

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