



DECISION SUPPORT SYSTEM

Date: 20.06.2015

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)**

**Q. 1. Expand the following**

1. MSD
2. GUI
3. ESS
4. MSE
5. OOP
6. CRM
7. MAPE
8. SFA

**Q. 2. Fill in the blanks**

1. ----- decision theory describes how should be made in order to accommodate a set of axioms believed to be desirable.
2. ROMC stands for representations, operations, memory and -----
3. In case of ----- method, number of dependent variables interacts with each other through a series of equations.
4. ----- method smoothes a sorted data value by consulting its neighborhood that is the value around it.
5. A typical Expert Systems (ES) generally consists of ----- components.
6. ----- is a sequence of user actions that is recorded and can be played back later to duplicate the original actions.
7. One application of ----- method of forecasting is Delphi technique.
8. One of the most useful capabilities of ----- is the tools available for visualizing data.

**Q 3. Match the following**

- |                 |   |
|-----------------|---|
| 1. Model        | a) One of the examples of Specific DSS                          |
| 2. DSS Tool     | b) The process of decomposing and formulating a problem         |
| 3. Synergism    | c) Representing a way of looking at the world                   |
| 4. S-PLUS       | d) A subclass of DSSs   |
| 5. GeoMed       | e) Statistical Analysis Language                                |
| 6. Modeling     | f) COBOL  |
| 7. GDSSs        | g) Copy Management or Replication Management                    |
| 8. Data Staging | h) Key to DSS that results from the tools working well together |

**Q 4. Find True or False of the following**

1. Decision support system can aid human cognitive deficiencies by interacting various source of information.
2. ARIMA stands for analytical regression integrated moving average model.
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. For data that is not stored elsewhere, a program needs to create a storage location.
6. Stand-alone Expert systems (ESs) is a computer-based support system that is embedded within ES or ES (interface) technology.
7. Histogram use binning to approximate data distributions and are a popular form of data reduction.
8. OLTP Systems often use fully normalized schema to optimize update/insert/delete performance, and to generate data consistency

**PART-B**

**48 Marks**

**( Attempt any three. Each question carry 16 marks)**

**Q 5. a)** What are the characteristics and objectives of DSS?

b) Compare DSS Model & Active Model

**Q 6. a)** Define Expert system. Discuss how it is integrated with DSS?

b) What are the characteristic and features of a good spreadsheet application?

**Q 7. a)** Explain data warehouse architecture.

b) Explain principle component analysis.

**Q 8. a)** What are the various challenges of data integration?

b) What is the importance of data mining in business perspective?

**Q 9.** Write short note on (ANY FOUR)

- a) Simon's classic model
- b) EDP versus MIS
- c) DSS Generator
- d) Component o DSS sys
- e) Compare ESSs and IRSs

**PART-C**

**20 Marks**

**(COMPULSORY)**

**Que 10. CASE STUDY**

Vodafone New Zealand Ltd., a subsidiary of the U.K.-based telecommunication giant, had achieved tremendous success in New Zealand. Starting from a very small base, the company quickly attained more than 56% market share. However as the mobile phone industry began to reach maturity, Vodafone's market share stagnated at about 56% and total number of customer leveled off. To make matter worse, other competitors emerge the cost of compliance with government regulations began to increase, and the revenue per customer also lagged. The company has to refocus its strategy of retaining and increasing its revenue from the current customers.

As a senior manager of customer analytics for Vodafone New Zealand, analyze this case and answer the below questions:

1. Discuss the challenges for Vodafone New Zealand and list the tools used to resolve above issues.
2. What initiatives will you take to increase the profit margin of the company?
3. How do you add revenue streams from the existing customers?

\*\*\*\*\*