



Machakos University College

[A Constituent College of Kenyatta University]

University Examinations for 2015/2016 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND SEMESTER EXAMINATION FOR DEGREE IN BACHELOR OF

SCIENCE IN COMPUTER SCIENCE

SCO419: DECISION SUPPORT SYSTEMS

Date: 8/08/2016

Time: 8:30 – 10:30 AM

Instruction

Answer question **ONE** and **Any** other **Two** among the four selective questions

QUESTION ONE (COMPULSORY)

- (a) Differentiate between
 - (i) structured and unstructured problems (2 marks)
 - (ii) model marts and model warehouses. (2 marks)
 - (iii) DSS and ES . (2 marks)
- (b) List and briefly describe Simon's four phases of decision making. (8 marks)
- (c) Explain why most groupware is deployed today over the Web. (6 marks)
- (d) Describe any three tools for knowledge harvesting (6 marks)
- (e) Explain any four properties for DSS (4 marks)

QUESTION TWO

- a) Describe the similarities and differences among internal, external and private data. (6 marks)
- b) Relate XML to knowledge management and to knowledge portals. (6 marks)
- c) Explain any four factors that determine information quality (8 marks)

QUESTION THREE

- a) Briefly explain three main parts of DSSs (6 marks)
- b) Describe any four groupware tools including their applications in DSS (12 marks)
- c) List two examples of intelligent agent used in DSS (2 marks)

QUESTION FOUR:

- a) Describe heuristic programming and state its application in DSS (6 marks)
- b) Write advantages, limitations and applications of semantic web. (6 marks)
- c) Define genetic algorithm and explain its basic process flow (use a diagram for basic process flow) (6 marks)
- d) Define data mining (2 marks)

QUESTION FIVE:

- a) USING DIAGRAMS, EXPLAIN THE FOLLOWING TYPES OF DSS ARCHITECTURE (6 marks)
 - (i) Network
 - (ii) Hierarchical
 - (iii) Centered
- b) Describe four DSS models in the table format shown below (12 marks)

DSS Model Category	Process and objectives	Representative techniques

- c) Define fuzzy logic in relation to DSS (2 marks)