TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN CIVIL ENGINEERING
(BSCE – 5TH YEAR)

ECE 2517: GEOGRAPHICAL INFORAMTION SYSTEM

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2014
TIME ALLOWED: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
  - *Answer booklet*
This paper consists of **FOUR** questions.
Answer question **ONE (COMPULSORY)** and any other **TWO** questions
All questions carry equal marks
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (COMPULSORY)

a) Define the term ERROR as applied in G/S system.   **(2 marks)**

b) State advantages of Database management system (DBMS) and its disadvantages.   **(15 marks)**

c) How do you classify G/S benefits in terms of tangible and non-tangible classes? **(9 marks)**

d) Differentiate between unavoidable errors (noise) and blunders (Gross) errors as sued in data quality management?   **(4 marks)**

Question Two

a) What are the main components of an ideal G/S software system?   **(6 marks)**

b) What are the advantages and disadvantages of manual digitizing system?   **(6 marks)**

c) Differentiate the following pairs of terms:
   (i)   Data and information
   (ii) Information and knowledge
   (iii) Discrete object and continuous field views
   (iv) Database and database management system   **(8 marks)**

Question Three

a) With the aid of a work flow, discuss data collection system in G/S   **(11 marks)**

b) Why is it important to scan a document?   **(3 marks)**

c) What are the parameters used in the evaluation of a digitizer?   **(6 marks)**

Question Four

a) What are the advantages and disadvantages of vector and raster data representations?
                (8 marks)
b) Why is it important to code attribute data?   **(2 marks)**

c) How is primary vector data captured? What are the basic parameters of evaluating a scanner?
                (10 marks)