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UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER

PROGRAMME: BSc LWM (Year 2 & Year 3)

COURSE CODE: LUM 206

TITLE OF PAPER: GEOGRAPHICAL INFORMATION SYSTEMS

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: NONE

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO OTHER QUESTIONS.

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QUESTION 1: COMPULSORY QUESTION

a. Briefly describe how spatial resolution will affect the accuracy of remotely sensed data.
(15 marks)

b. Describe how a composite image can be produced, highlighting when such an image can be used
(10 marks)

c. Discuss in details the three formats for presenting vector GIS data. (15 marks)

QUESTION 2.

a. Discuss how you can go about undertaking binary masking of water bodies in a satellite image.
(15 marks)

b. Describe three methods of capturing and entering data in GIS, specifying one advantage for each method. (15 marks).

QUESTION 3

a. Describe the procedure to be followed when producing a Normalised difference Vegetative Index (NDVI).   (15 marks)

b. Discuss the three types of data that can be collected using a GPS, highlighting how such data can be used in designing a functional GIS.
(15 marks)

QUESTION 4

a. Using examples to illustrate your answer, describe how spectral reflectance can be used to distinguish different land features.   (15 marks)

b. Describe the difference between map data, attribute data and image data as used in GIS.

(15 marks)