BINDURA UNIVERSITY OF SCIENCE EDUCATION
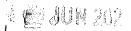
FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF DISASTER RISK REDUCTION

MASTER OF SCIENCE DEGREE IN DISASTER RISK MANAGEMENT

MDR511: GEO-INFORMATION IN DISASTERS

EXAMINATION   JUN 20?   **TIME: 3 HOURS**

ANSWER ONE (1) QUESTION FROM SECTION A AND TWO (2) QUESTIONS FROM EITHER SECTION B OR C. USE ILLUSTRATIONS WHERE RELEVANT. MARKS FOR EACH QUESTION ARE INDICATED IN BRACKETS [ ].

Section A: Choose 1 (one) question

1. a) Explain the functionalities of a GIS.   [5]
   b) Compare and contrast the vector and raster data models in GIS.   [10]
   c) With reference to remote sensing outline the supervised image classification process.   [10]

2. a) Justify the application of radar technology in flood monitoring.   [5]
   b) Explain the importance of any 4 components of GIS.   [10]
   b) Deliberate any five elements of visual image interpretation.   [10]

Section B: Choose 2 (two) questions

3. Discuss the prospects and challenges of the application of geospatial technology in disaster risk management.   [25]

4. Explain a detailed procedure for the application of NDVI in drought hazard monitoring in Zimbabwe.   [25]

5. Justify and design a GIS based road accident programme for City of Harare.   [25]

END OF EXAMINATION