

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF DISASTER RISK REDUCTION

JUN 2025

**DMG225: GEOGRAPHIC INFORMATION SYSTEMS APPLICATIONS IN
DISASTER MANAGEMENT**

EXAMINATION

TIME: 3 HOURS

**ANSWER ANY THREE (3) QUESTIONS. USE ILLUSTRATIONS AND DIAGRAMS
WHERE RELEVANT. MARKS FOR EACH QUESTION ARE INDICATED IN
BRACKETS [].**

QUESTIONS

1. Both primary and secondary data sources are indispensable in GIS-based Disaster Management programmes. Discuss. [25]
2. A rural community in Zimbabwe is currently characterized by persistent hydro-meteorological disasters. You are engaged by the Civil Protection department to evaluate the impacts of such disasters, provide a detailed discourse of how you would use GIS techniques to assess the impacts. [25]
3. Discuss the application of different GIS data models in disaster management. [25]
4. Examine the challenges and opportunities for incorporating GIS in operational disaster management in Zimbabwe [25]
5. Incorporating spatial analysis techniques in development planning is a precondition for circumventing flood disasters in built up areas. Discuss. [25]