BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF DISASTER RISK REDUCTION

BACHELOR OF SCIENCE HONOURS DEGREE IN DISASTER MANAGEMENT SCIENCES

DMG 208: MANAGEMENT OF GEOPHYSICAL HAZARDS

EXAMINATION APR 2025 **TIME: 3HOURS**

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

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1. Imagine the local government has commissioned you to investigate the socio-economic factors that contribute to vulnerability in urban areas. In this situation, how would you conduct your research to identify and understand the specific socio-economic factors that influence vulnerability to geophysical hazards in urban environments? Provide detailed insights and examples to support your analysis. **[25]**

2. Discuss, structural and non-structural measures that have been used with great success in mitigating volcanic hazards, providing comprehensive explanations and real-world examples to support your discussion. **[25]**

3. Imagine you are a disaster management consultant invited to deliver a lecture on the management of geophysical hazards, particularly the post-disaster management period. How would you discuss the importance of post-disaster period, emphasizing the key activities that should be implemented and how they facilitate effective management of geophysical hazards. **[25]**

4. Discuss the ways in which earthquake early warning systems contribute to reducing the impacts of earthquakes, provide comprehensive explanations and real-world examples to support your discussion. **[25]**

5. As a disaster management expert, participating in a conference focused on management of geophysical hazards, with the central theme of the conference being on the importance of adopting a multi-hazard approach for managing geophysical hazards. In this context, how would you discuss and support the assertion that effective and efficient management of geophysical hazards requires a multi-hazard approach. **[25]**

END OF EXAMINATION