



Botswana Open
University

CERTIFICATE
July-December

Sessional Examination
Technology in Disaster Management 011

BOTSWANA OPEN UNIVERSITY
CERTIFICATE IN DISASTER MANAGEMENT
TECHNOLOGY IN DISASTER MANAGEMENT

TD 011

Sessional Examination

Duration: 3 hours

Marks: 100

Instructions to candidates:

1. The examination consists of **Four** sections: A, B, C and D.
2. Begin each answer to a new question on a new page
3. Answer all the questions according to instructions given in each section
4. Write answers in the answer booklet provided
5. Write in grammatical English



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SECTION A: Multiple-choice questions. [10 Marks]

Answer all the questions by choosing the correct answer from the alternatives given.

1. The ultimate purpose of emergency management is to _____.
 - A. Training
 - B. Protect property
 - C. Testing
 - D. Recovery

2. Electromagnetic waves are not involved in _____.
 - A. The sense of touch
 - B. Radio Use
 - C. Record keeping
 - D. Science

3. _____ is one of the management systems.
 - A. Hazmat
 - B. Communication
 - C. Response
 - D. Transmission

4. GIS and the disaster management cycle involve all these except _____.
 - a. Planning
 - b. Mitigation
 - c. Recovery
 - d. Satellite

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5. GIS can be applied to the disaster management cycle to _____.
- Help broadcast critical post-disaster information to the public
 - Assist in preparedness by identifying and locating important resource.
 - Build flood warning systems at the community level.
 - Aid in recovery after a disaster by automatically posting requests for much needed international assistance on the Internet.
6. Which of the following conditions interfere with GPS functions?
- Darkness
 - Low fog
 - Volcanic eruption
 - None of the Above
7. Electromagnetic waves are not involved in _____.
- The sense of touch
 - Radio
 - Microwave Ovens
 - X- Rays
8. The GIS application is particularly useful for _____.
- The creation of hazard inventory maps, building community resilience and providing critical disaster management information to emergency travellers
 - The creation of hazard inventory maps, location of critical facilities and conducting vulnerability assessments.
 - Policemen, firemen and disaster management officials to coordinate distribution of relief items after a disaster.
 - The creation of an intricate disaster plan that is collaboratively drafted and supported by all response agencies.



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9. Select the two major types of mass media from the choices below

- a. Television and Radio
- b. Radio and Satellite radio
- c. Electronic and print
- d. Television and Print

10. Which ensures compliance with HAZMAT?

- a. Route planning
- b. Driver authentication
- c. Detection
- d. Tracking systems



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SECTION B: True/False questions.

[10 Marks]

Indicate if the statement is True or False

1. Remote sensing does not save time.
2. Media is always a trusted source for disaster related information.
3. Passive remote sensing makes use of emitted electromagnetic waves from radars.
4. The media never exaggerate some element of the disaster and create unnecessary panic.
5. Geographic information system can be integrated with databases.
6. GIS is able to represent spatial information over a wide geographic area.
7. GIS technology integrates models, maps and other graphic forms of information.
8. The ultimate purpose of emergency management is to protect proper.
9. Roadside detectors can monitor for the presence of hazardous cargo in sensitive areas and confirm that the cargo is on the expected route.
10. Flooding is not one of the most frequently occurring hazards.



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SECTION C: Short answer questions.

[30 Marks]

Answer all questions from this section.

QUESTION 1

Explain how EMS can add value to disaster management in the following areas.

- a) Hazardous Materials Management (2 marks)
- b) Emergency Medical Services (2 marks)
- c) Response and Recovery (2 marks)

QUESTION 2

Appraise any four activities that can be useful in GIS applications. (8 marks)

QUESTION 3

List and explain four technological tools that can be used to aid in the processes of disaster prevention and mitigation. (8 marks)

QUESTION 3

List and explain any four roles of media in disaster management. (8 marks)



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SECTION D: Essay-type questions.

[50 Marks]

Choose any two (2) questions in this section.

QUESTION 1

Discuss technology you would use during any natural disaster and support your answer.

(25 marks)

QUESTION 2

Discuss how Geographic Information System (GIS) and Disaster Management cycle relate?

(25 marks)

QUESTION 3

- a. Give a detailed account of the advantages and disadvantages of remote sensing.
(10 marks)

- b. Discuss the response and recovery of disaster management.
(15 marks)

END OF EXAMINATION!