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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(ONLINE)
SEMESTER I
SESSION 2020/2021**

COURSE NAME : CRITICAL INFRASTRUCTURE
SECURITY
COURSE CODE : BIS 33303
PROGRAMME CODE : BIS
EXAMINATION DATE : JANUARY / FEBRUARY 2021
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS.

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THIS QUESTION PAPER CONSISTS OF **SIX (6)** PAGES

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SECTION A

Instruction: Choose the BEST answer for each of the following questions.

- Q1** What is a methodical examination or review of an environment to ensure compliance with regulations and to detect abnormalities, unauthorized occurrences, or outright crimes?
- A. Penetration testing.
 - B. Auditing.
 - C. Risk analysis
 - D. Entrapment.
- Q2** Failure to _____ can result in the perception that due care is not being maintained.
- A. perform periodic security audits
 - B. deploy all available safeguards
 - C. assess performance reviews
 - D. create audit reports for shareholders
- Q3** Audit trails are considered as _____ type of security control.
- A. administrative
 - B. passive
 - C. corrective
 - D. physical
- Q4** The act of searching for unauthorized modems is known as _____.
- A. scavenging
 - B. espionage
 - C. system auditing
 - D. war dialing

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Q5 What is the term used to describe the responsibility of a firm's officers and directors to ensure that adequate measures are in place to minimize the effect of a disaster on the organization's continued viability?

- A. Corporate responsibility.
- B. Disaster requirement.
- C. Due diligence.
- D. Going concern responsibility.

Q6 You are concerned about the risk that an avalanche poses to your RM3 million shipping facility. Based upon expert opinion, you determine that there is a 5 percent chance that an avalanche will occur each year. Experts advise you that an avalanche would completely destroy your building and require you to rebuild on the same land. Ninety percent of the RM3 million value of the facility is attributed to the building and 10 percent is attributed to the land itself.

What is the single loss expectancy of your shipping facility to avalanches?

- A. RM3,000,000
- B. RM2,700,000.
- C. RM270,000.
- D. RM135,000.

Q7 Which resource should you protect first when designing continuity plan provisions and processes?

- A. Physical plant.
- B. Infrastructure.
- C. Financial.
- D. People.

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Q8 Terbang Di Awangan Industries expects that it would lose RM10 million if a tornado struck its aircraft operations facility. It expects that a tornado might strike the facility once every 100 years.

What is the single loss expectancy for this scenario?

- A. 0.01
- B. RM10,000,000
- C. RM100,000
- D. 0.10

Q9 What type of plan outlines the procedures to follow when a disaster interrupts the normal operations of a business?

- A. Business Continuity Plan
- B. Business Impact Assessment
- C. Disaster Recovery Plan.
- D. Vulnerability Assessment

Q10 Which one of the following is an example of a man-made disaster?

- A. Tsunami.
- B. Earthquake.
- C. Power outage.
- D. Lightning strike.

Q11 Which one of the following statements about Business Continuity Planning and Disaster Recovery Planning is **NOT TRUE**?

- A. Business Continuity Planning is focused on keeping business functions uninterrupted when a disaster strikes.
- B. Organizations can choose whether to develop Business Continuity Planning or Disaster Recovery Planning plans.
- C. Business Continuity Planning picks up where Disaster Recovery Planning leaves off.
- D. Disaster Recovery Planning guides an organization through recovery of normal operations at the primary facility.

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- Q12** Which one of the following database recovery techniques is an exact, up-to-date copy of the database maintained at an alternative location?
- A. Transaction logging.
 - B. Remote journaling.
 - C. Electronic vaulting.
 - D. Remote mirroring.
- Q13** What disaster recovery principle best protects your organization against hardware failure?
- A. Consistency.
 - B. Efficiency.
 - C. Redundancy.
 - D. Privacy
- Q14** Which one of the following alternative processing sites takes the longest time to activate?
- A. Hot site.
 - B. Mobile site.
 - C. Cold site.
 - D. Warm site.
- Q15** What type of database backup strategy involves bulk transfers of data to a remote site on a periodic basis but does not involve maintenance of a live backup server at the remote site?
- A. Transaction logging
 - B. Remote journaling.
 - C. Electronic vaulting.
 - D. Remote mirroring.

(30 marks)

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SECTION B

Q16 An office has a Senior Management Team, Application Owners and Users.

Taking into account different category of staffs in the organization, propose how to employ a document classification system to ensure confidentiality and integrity are achieved in this office.

(20 marks)

Q17 Discuss whether you agree that Malaysia should have its own nuclear plant for energy sustainability. Give **TWO (2)** arguments.

(6 marks)

Q18 The criticality of an infrastructure is measured based on the impact it has on a nation. Assign suitable criticality level for **SIX (6)** critical infrastructure sectors in Malaysia.

(12 marks)

Q19 Changes in the weather patterns is an example of a threat. A lightning strike can affect power grid.

Analyze another **THREE (3)** threats that could affect Critical Information Infrastructure Protection CIIP.

(6 marks)

Q20 Demonstrate the concept of dependency and interdependency using any CIIP sectors in Malaysia.

(6 marks)

- END OF QUESTIONS -

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