



*(Knowledge for Development)*

**KIBABII UNIVERSITY**

**(KIBU)**

**UNIVERSITY EXAMINATIONS  
2020/2021 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS  
YEAR FOUR SEMESTER ONE EXAMINATIONS**

**FOR THE DEGREE OF  
BACHELOR OF SCIENCE  
COMPUTER SCIENCE**

**COURSE CODE : CSC 463E**

**COURSE TITLE : WEB APPLICATION SECURITY**

**DATE: 12/01/2022      TIME: 08.00 A.M – 10.00 A.M**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

### QUESTION ONE (COMPULSORY) [30 MARKS]

- a. Difference between blocklist and allow list WAFs [4 Marks]
- b. Define the role of the following cyber security personnel: [6 Marks]
  - i. Security Engineer
  - ii. Security Architect
  - iii. Cryptanalyst:
- c. What strategy can be used to manage application security risks? [4 marks]
- d. Web development is expediting at an aggressive rate. State and Explain five challenges experienced in web application development [10 Marks]
- e. What is a security risk assessment? [2 Marks]
- f. Discuss the Importance of an Information Security Policy [2 Marks]
- g. Define the term Web application security [2 Marks]

### QUESTION THREE [20 MARKS]

- a. Why Do We Need Encryption? [8 marks]
- b. Discuss the Three Important Types of Encryption Techniques [6 marks]
- c. Define a security management model [2 Marks]
- d. Explain digital Forensics and state two purposes of it [4 Marks]

### QUESTION FOUR [20 MARKS]

- a. Explain the following Specific Encryption Algorithms [10 Marks]
  - i. *AES*.
  - ii. *Triple DES*.
  - iii. *RSA*.
  - iv. *Blowfish*
  - v. *Twofish*.
- b. Explain the following types of WAFs: network-based, host-based, and cloud-based [9 Marks]
- c. What do you understand by a digital signature? [1 Mark]

### QUESTION FIVE [20 MARKS]

- a. There are some best Practices for drafting Information Security Policies. State any five. [10 Marks]
- b. As a software developer there are some Tips developers should remember to protect and secure information. Mention any five. [5 Marks]
- c. Explain five computer security threats [5 Marks]