ELIZADE UNIVERSITY

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TITLE OF EXAMINATION: B.Sc EXAMINATION
FACULTY: BASIC AND APPLIED SCIENCES
DEPARTMENT: MATHEMATICS & COMPUTER SCIENCE
SESSION: 2020/2021   SEMESTER: SECOND
COURSE CODE: CYB 206   CREDIT UNIT: THREE (3)
COURSE TITLE: EDGE AND PERIMETER SECURITY
INSTRUCTION: ATTEMPT ANY THREE (3) QUESTIONS   TIME: 2.5 HOURS

1. (a) Write a short note on each of the following?   **(8 marks)**

     (i) White hat hackers (ii) Black Hat hackers (iii) Script Kiddies (iv) Hacktivists

   (b) Draw a simple diagram that shows the relationship between the basic security concepts of risks, threats, countermeasures, based on assets, threat agents, and others? **(4 marks)**

   (c) Explain each of the following security services giving details of their essence? **(8 marks)**

   (i) Authentication (ii) Access control (iii) Data confidentiality (iv) Data integrity

2. (a) Write a short note on each of the following malicious codes?   **(6 marks)**

     (i) Bacterium (ii) Logic bomb (iii) Trapdoor (iv) Trojan horse (v) Virus (vi) Worms

   (b) Explain the denial of service (DoS) attack and discuss two DoS methods? **(8 marks)**

   (c) Explain what an intrusion detection system (IDS) is and buttress your answer with a simple diagram?   **(6 marks)**

3. (a) Explain interception attack and explore two types of it? **(5 marks)**

   (b) Based on algorithmic and architectural perspective, enlist the components of an intrusion detection system? **(5 marks)**

   (c) By using a tabulation list 3 advantages and 3 disadvantages of a virtual private network? **(3 marks)**

   (d) Explain how virtual private network works by concentrating on tunneling and buttressing your point with a detailed diagram? **(7 marks)**

4. (a) Explain cross site scripting and list three ways to defend against it? **(5 marks)**

   (b) Enlist five problems or shortcoming of the current intrusion detection systems? **(5 marks)**

   (c) Explain briefly the five types of virtual private network (VPN)? **(10 marks)**

5. (a) Enlist five ways to defend against SQL Injection? **(5 marks)**

   (b) Explain what a buffer overflow attack is and fully explore its attacking style? **(6 marks)**

   (c) For a firewall to allow or disallow a traffic, enlist five data that must be available for its decision-making process? **(5 marks)**

   (d) Technically, what are the four actions available to the firewall after meeting all criteria for its decision making? **(4 marks)**