



**UNIVERSITY EXAMINATIONS**  
**EXAMINATION FOR SEPTEMBER/DECEMBER 2019/2020 FOR DIPLOMA IN**  
**ETHICAL HACKING**  
**CODE: RES024 COURSE TITLE: NETWORK SECURITY**

DATE:

TIME: 2 HOURS

**GENERAL INSTRUCTIONS:**

Students are NOT permitted to write on the examination paper during examination period. This is a closed book examination. Text book/Reference books/notes are not permitted.

**SPECIAL INSTRUCTIONS:**

This examination paper consists Questions in Section A followed by section B.

Answer **Question 1 and any Other Two** questions.

QUESTIONS in ALL Sections should be answered in answer booklet(s).

1. **PLEASE start the answer to EACH question on a NEW PAGE.**
2. **Keep your phone(s) switched off at the front of the examination room.**
3. **Keep ALL bags and caps at the front of the examination room and DO NOT refer to ANY unauthorized material before or during the course of the examination.**
4. **ALWAYS show your working.**
5. **Marks indicated in parenthesis i.e. ( ) will be awarded for clear and logical answers.**
6. **Write your REGISTRATION No. clearly on the answer booklet(s).**
7. **For the Questions, write the number of the question on the answer booklet(s) in the order you answered them.**
8. **DO NOT use your PHONE as a CALCULATOR.**
9. **YOU are ONLY ALLOWED to leave the exam room 30minutes to the end of the Exam.**
10. **DO NOT write on the QUESTION PAPER. Use the back of your BOOKLET for any calculations or rough work.**

## SECTION A (COMPULSORY)

### QUESTION 1 (30 MARKS)

- a) Define the following terms **(10 Marks)**
  - i) Intrusion
  - ii) IDS
  - iii) IPS
  - iv) Warwalking
  - v) Wardriving
- b) Explain factors determining the effectiveness of an IDS **(10 Marks)**
- c) What is VPN technology? **(2 Marks)**
- d) State **THREE** different locations where VPNs are typically used? **(3 Marks)**
- e) List and explain the **TWO** categories Access Control Policies **(5 Marks)**

## SECTION B (ANSWER ANY TWO QUESTIONS)

### QUESTION 2 (20 MARKS)

- a) Define An IDS **(2 Marks)**
- b) Describe various classifications of IDS **(10 Marks)**
- c) Outline the the typical components of an IDS **(8 Marks)**

### QUESTION 3 (20 MARKS)

- a) What are antennas? **(2 Marks)**
- b) Describe the following forms of “Wi-Fi” attacks **(8 Marks)**
  - i) WarWalking
  - ii) WarChalking
  - iii) WarFlying
  - iv) WarDriving
- c) State **advantages** and **disadvantages** of wireless networks **(10 Marks)**

**QUESTION 4 (20 MARKS)**

- a) Define a router? **(3 Marks)**
- b) Explain **TWO** types of routers **(8 Marks)**
- c) Describe any **THREE** functions of a router **(9 Marks)**

**QUESTION 5 (20 MARKS)**

- a) What is Access control? **(2 Marks)**
- b) Explain the following concepts as related to Access Control **(10 Marks)**
  - i) Object
  - ii) Subject
  - iii) Operation
  - iv) Permission (privilege)
  - v) Access Control List (ACL)
- c) State and explain the essential services provided by access control systems **(6 Marks)**
- d) List **TWO** categories of Access Control Policies **(2 Marks)**