FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

DEPARTMENT OF INFORMATION AND MEDIA TECHNOLOGY

SECOND SEMESTER 2014/2015 EXAMINATION

COURSE CODE:	IMT 526
COURSE TITLE:	COMPUTER SECURITY TECHNIQUES
CREDIT UNITS:	2
TIME ALLOWED:	2 HOURS
COURSE LECTURER(S):	MR. S.O. GANIYU
NUMBER OF QUESTIONS:	3
NUMBER OF PAGES:	2

INSTRUCTIONS

- Answer all questions
- Do **not** use red pen
- Please use a clear handwriting
- This exam is closed book, closed notes, closed laptop and closed cell phone
- Please use non-programmable calculators only

Vetted

Dr. T. Aboyar
External Examiner
15/7/15

Question 1

(a) List eight (8) of the subfields of complexity theory. (8 marks)

(b) What is perfect secrecy? (3 marks)

(c) State the formal definition of Shannon's theory of perfect secrecy. (3 marks)

(d) State the name and next number in the sequences below? (6 marks)

    i.   4; 6; 8; 9; 10;

    ii.   3; 7; 11; 15;

    iii.   1; 3; 6; 10;

Question 2

(a) Describe six (6) of the characteristics of a good password. (6 marks)

(b) Decrypt the numbers represented as cyphertex below using RSA token (89, 5, 6); (6 marks)

        67, 80, 74.

(c) It is obvious that computer law is insufficient to address the quantum of electronic crimes that are pervading our digital world. Justify the need for urgent promulgation of Information and Communication Technology law or cyber security law in Nigeria. You are requested to support your answer with four (4) reasons. (8 marks)

Question 3

(a) Explain the following concepts; (6 marks)

i. Multi-factor authentication   ii. Hash salting

(b) i. Due to change in business operation, FUT Minna campus radio (Search FM) wishes to render its broadcast as pay service. What will you do as media security expert to ensure that only subscribed listeners receive broadcast from the radio station? (4 marks)

ii. List the four (4) techniques to achieve the proposed business operation described in question 3(b)i. (4 marks)

(c) (i) Describe block cipher. (3 marks)

(ii) State three (3) examples of block cipher. (3 marks)

Best of luck.