

Roll No. : .....

Total No. of Questions : 16 ]

[ Total No. of Printed Pages : 3

# SEM4021

M.Sc. (IVth Semester) Examination, 2021

CYBER SECURITY

Paper - MCSEC-401

(Network and Wireless Security)

Time : 1½ Hours ]

[ Maximum Marks : 40

*Note* :- The question paper contains three Sections.

**Section-A**

(Marks : 1 × 10 = 10)

*Note* :- Answer all the *ten* questions carries 1 mark each. The answer should not exceed 50 words.

**Section-B**

(Marks : 3 × 5 = 15)

*Note* :- Answer *five* questions by selecting at least *one* question from each Unit. Each question carries 3 marks. Answers should not exceed 200 words.

**Section-C**

(Marks : 5 × 3 = 15)

*Note* :- Answer *three* questions by selecting *one* question from each Unit. Each question carries 5 marks. The answer should not exceed 500 words.

**Section-A**

1. (i) Why is threat modeling important ? Name any *two* such models.
- (ii) How anti-replay service is achieved in IP packets ?

BI-1609

( 1 )

SEM4021 P.T.O.

- (iii) Define OTP and its benefits.
- (iv) What is RF interference ?
- (v) Which type of transmission media is used in wireless LAN ?
- (vi) What is message integrity ?
- (vii) CDPD was used in which generation of cellular telephony ?
- (viii) Differentiate between secure connection and secure session.
- (ix) What do you understand by Scatternets ?
- (x) What is mitigation in network security ? Write any common mitigation method.

### **Section-B**

#### **Unit-I**

- 2. What is the difference between an SSL connection and SSL session ?
- 3. In tunnel mode new outer IP header is constructed for both IPV<sub>4</sub> and IPV<sub>6</sub>. Indicate the relation between the header fields of inner and outer IP packets.
- 4. Define Kerberos.

#### **Unit-II**

- 5. What functionality does S/MIME provide ?
- 6. Explain WEP.
- 7. Discuss wireless security standards.

#### **Unit-III**

- 8. What are the various threads to bluetooth security ?
- 9. Discuss baseband layer and its security aspects.
- 10. What is the purpose of WAP gateway ?

## **Section–C**

### **Unit–I**

11. Is it possible to counter brute-force cryptanalytic attack by S.S.L. If yes, how and if no, why not ?
12. In context of IPsec explain :
  - (a) Roles of Oakley and ISAKMP.
  - (b) Security services provided by AH and ESP.

### **Unit–II**

13. Explain services provided by PGP.
14. Discuss threats in wireless communication.

### **Unit–III**

15. Define the security services provided by WTLS.
16. What is the basic difference between GPRS and GSM ? Discuss GSM security.