

Roll No. :

Total No. of Questions : 16]

[Total No. of Printed Pages : 3

SEM-3026

M.Sc. (IIIrd Semester) Examination, 2022

CYBER SECURITY

Paper - MCSEC-303

(Wireless LAN and Mobile Computing)

Time : 3 Hours]

[Maximum Marks : 40

The question paper contains three Sections.

Section-A

(Marks : 1 × 10 = 10)

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

Section-B

(Marks : 3 × 5 = 15)

Note :- The candidate is required to answer *five* questions by selecting at least *one* question from each Unit. Each question carries **3** marks. Answer should not exceed **200** words.

Section-C

(Marks : 5 × 3 = 15)

Note :- The candidate is required to 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. Attempt all questions. Answer should not exceed **50** words in each question.

(i) Explain the problems with Wireless Networks.

BR-846

(1)

SEM-3026 P.T.O.

- (ii) List the basic access mechanisms defined for IEEE 802.11.
- (iii) What are the categories of Wireless Networks ?
- (iv) What are the four types of handover available in GSM ?
- (v) What is Mobility ?
- (vi) What are the logical channels in GSM ?
- (vii) How is GPRS higher than 2G ?
- (viii) What is Indirect TCP (I-TCP) ?
- (ix) What is DHCP ?
- (x) What is Tunneling Process ?

Section-B

Note :- Answer *five* questions in about **200** words, by selecting at least *one* question from each Unit. Each question carries **3** marks.

Unit-I

- 2. Write the characteristics of secure and hoc networks.
- 3. Explain the different types of services offered by Bluetooth.
- 4. Differentiate Infra-red and Radio transmission.

Unit-II

- 5. Distinguish Mobile Computing *Vs.* Wireless Networking.
- 6. Discuss the architecture of UMTS.
- 7. Can UMTS networks easily work with the existing GSM/GPRS networks ? Justify your answer.

Unit-III

- 8. Why the traditional IP cannot be used in a Mobile Network ? What are the main differences between the traditional IP and the mobile IP ?
- 9. What are the configuration parameters to adapt TCP to Wireless Environments ?
- 10. What do you mean by encapsulation in the context of mobile IP ? Explain why these are needed.

Section–C

Note :- Attempt *three* questions in about **500** words, by selecting *one* question from each Unit. Each question carries **5** marks.

Unit–I

11. Explain the distinguishing features of various generations of wireless networks.
12. Analyse the need for Ad-hoc networks.

Unit–II

13. Explain the structure, characteristics, applications of Mobile Computing.
14. Explain in detail about the architecture of GPRS.

Unit–III

15. Illustrate packet delivery mechanism in mobile IP network with neat diagram.
16. What are the main functions of DHCP ? Why is DHCP needed ? Can it be used when nodes are mobile ? Explain your answer.