M-190192

B. Tech. EXAMINATION, 2019

Semester VII (CBS)

WIRELESS & MOBILE COMPUTING

CS-702

Time : 3 Hours *Maximum Marks : 60*

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt *Five* questions in all, selecting *one* question each from Sections A, B, C and D. Section E is compulsory.

Section A

1. (a) What is Mobile Computer ? What is the need of mobile computing ? **5**

   (b) Compare and contrast the various multiple access technology used in mobile computing. **5**

2. Explain the GSM architecture in detail with neat block diagram. Also explain radio interface of GSM. **10**

Section B

3. Explain in detail about cellular network with neat diagram. Also discuss the concept of frequency reuse. **10**

4. Explain in detail the different ways of performing the encapsulation needed for tunnelling in mobile IP. **10**

Section C

5. Describe in detail IEEE 802.11 protocol architecture. Give the *three* basic mechanisms defined for IEEE 802.11. Also explain WLAN architecture. **10**

6. (a) Explain about IP packed delivery and agent discovery with diagrams. **5**

   (b) What are the goals of Mobile IP6 ? Explain. **5**

Section D

7. Explain the following in detail : **10**

   (a) Characteristics of Wireless Ad-hoc networks

   (b) Vehicular Ad-hoc networks (VANET)

8. What is MANET ? Explain in detail MANET and its routing protocol strategies with diagrams. **10**

Section E

9. Explain the following : **2×10=20**

(i) What is meant by Mobility Management ?

(ii) What are the two basic group of logical channels in GSM ?

(iii) Mention the design goals of WLANs.

(iv) List four types of handover mechanism in GSM.

(v) State the advatages and disadvantages of cellular IP gateway.

(vi) What are the applications of VANET ?

(vii) How is power management done in IEEE802.11 ?

(viii) Define binding in Mobile IP.

(ix) Compare MANET and VANET.

(x) Define the term "Generic Routing Encapsulation".