**IT6601 MOBILE COMPUTING**

**ASSIGNMENT QUESTIONS**

**Unit I**

**SYLLABUS:** Mobile Computing – Mobile Computing vs. wireless Networking – Mobile

Computing Applications – Characteristics of Mobile computing – Structure of Mobile

Computing Application. MAC Protocols – Wireless MAC Issues – Fixed Assignment Schemes –

Random Assignment Schemes – Reservation Based Schemes.

1. What are signals? Explain signal propagation ranges.

2. What is multiplexing? Explain the different types.

3. Explain modulation and its types.

4. What is medium access control? Explain in detail.

5. Draw the flow diagram for Aloha and explain pure aloha and slotted aloha.

6. Explain the CSMA protocol.

7. What is polling? Explain.

**UNIT – II**

**MOBILE INTERNET PROTOCOL AND TRANSPORT LAYER**

**SYLLABUS:** Overview of Mobile IP – Features of Mobile IP – Key Mechanism in Mobile IP –

Route Optimization. Overview of TCP/IP – Architecture of TCP/IP- Adaptation of TCP Window

– Improvement in TCP Performance.

1. Explain the characteristics and design goals of Mobile IP

2. Discuss the Key Mechanism in Mobile IP.

3. Draw the architecture of Mobile IP

4. Discuss about Improvement in TCP Performance.

5. Explain the motivation and requirements for Mobile IP.

6. Write short notes on a. Snooping TCP b. Mobile TCP c. Transaction oriented TCP

**UNIT III**

**MOBILE TELECOMMUNICATION SYSTEM**

**SYLLABUS:** Global System for Mobile Communication (GSM) – General Packet Radio Service

(GPRS) – Universal Mobile Telecommunication System (UMTS)

1. What are the mobile services offered by GSM?

2. Draw and explain the architecture of GSM.

3. Explain GSM Hierarchy of frames.

4. What are the types of handovers in GSM? Explain.

5. Explain the architecture of DECT.

6. What are the domains and interfaces of UMTS?

7. Explain the concept of breathing cells.

8. What is LTE? Draw the frame structure and architecture.

**UNIT IV**

**MOBILE AD-HOC NETWORKS**

**SYLLABUS:** Ad-Hoc Basic Concepts – Characteristics – Applications – Design Issues – Routing

– Essential of Traditional Routing Protocols –Popular Routing Protocols – Vehicular Ad Hoc

Networks ( VANET) – MANET vs. VANET – Security.

1.Explain the basic characteristics and applications of Mobile Ad hoc networks. [U]

**May/June2016**

**2.** Explain the various routing strategies in mobile ad-hoc networks. [U]

**3.** MANET Routing protocols. [An] **Nov/Dec 2014**

**4.** Explain DSR Routing Protocol in detail. [An] **May/June 2016**

**5.** Explain the following: [U]

(i) DSDV routing protocol

(ii) Ad-hoc DSR routing protocol

**6.** Explain Dynamic Source Routing. [U] **May/June2014**

**7.** Discuss and detail the differences between DSDV and DSR routing protocols. [An]

**8.** What are the differences between AODV and the standard distance vector algorithm? Why are

extensions needed? [An]

**9.** Explain about Hybrid Routing protocols in MANETs. [U]

**10.** Demonstrate how multicast routing is carried out in ad-hoc networks. [An]

**11.** Define VANET? Explain how does it differ from MANET? Explain any one application of

VANET. [An]

**12.** Draw and explain the architecture of VANET. [U] **May/June 2016**

**13.** Discuss about various schemes in VANET routing. [An]

**14.** Explain the various security attacks on VANET. [U] **May/June 2016**

**UNIT V**

**MOBILE PLATFORMS AND APPLICATIONS**

**SYLLABUS:** Mobile Device Operating Systems – Special Constrains & Requirements –

Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry,

Windows Phone – MCommerce – Structure – Pros & Cons – Mobile Payment System – Security

Issues.

1.Explain in detail about the architecture of Mobile Operating system. [U]

2. Explain the components of Mobile Operating Systems. [U] **May/June 2016**

3. Explain the following: [An]

a) Android OS

b) Windows Phone OS

c) Apple IOS

d) Blackberry OS

4. Write short notes on Android SDK. [U] **May/June 2016**

5. Explain about M-Commerce and its structure with neat sketch. [R]

6. Explain the various applications of M-Commerce. [R] **May/June 2016**

7. Discuss briefly about the various technologies involved in M-Payment system. [Ap]

8. Explain the working of M-Payment system with any example application. [An]

9. Explain the Mobile Payment Scheme and Security Issues. [U] **May/June 2016**