BE/COM/ SEM VII / REV
MOBILE COMPUTING

1 1-Con No-85

14/12/1

Con. 6599-10. (REVISED COURSE) GT-8842

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Make **suitable** assumption wherever **necessary** and clearly justify them.

Q. 1. (a) Which components are new in GPRS as compared to GSM? What is their purpose? [5]

(b) What are the general problems of Mobile IP regarding the support of quality of service? [5]

(c) Compare IEEE 802.11, HIPERLAN-2 and Bluetooth with regard to their ad-hoc Capability [5]

(d) What is the simple scheme to solve the hidden terminal problem in wireless network? [5]

Q. 2. (a) What are the main benefits of spread spectrum system? How can spreading be achieved? Explain the block diagram of FHSS transmitter and receiver. [10]

(b) Elaborate on various handover mechanisms in cellular system. [10]

Q. 3. (a) Explain UMTS architecture and its domains. [10]

(b) How power management is achieved in ad-hoc and infrastructure modes of WLAN (802.11)? [10]

Q. 4. (a) Explain WATM reference model with several access scenarios. [10]

(b) Why traditional TCP is not suitable for mobile environment? Discuss about strengths and weaknesses of indirect-TCP, Snooping-TCP and M-TCP. [10]

Q. 5. (a) Explain the tunneling mechanism of Mobile IP using IP-in-IP, minimal and generic routing encapsulation respectively. Discuss pros and cons of these three methods. [10]

(b) Explain protocol architecture of DECT. [10]

Q. 6. (a) How can higher data rates be achieved in standard GSM using additional schemes HSCSD, GPRS and EDGE? What are the main differences of these approaches? [10]

(b) List the services offered by 3G mobile systems. Discuss the architecture of wireless local loop (WLL). [10]

Q. 7. Write short notes on **any two** [20]

(a) Capabilities of satellite in mobile communication
(b) Wireless Telephony application
(c) Bluetooth protocol stack
(d) HIPERLAN-2