

7E4238

Roll No. \_\_\_\_\_

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**7E4238**

**B. Tech. VII Sem. (Back) Exam., Nov.-Dec.-2016**  
**Computer Engineering**  
**7CS2 (O) Wireless Communication & Networks**

**Time: 3 Hours**

**Maximum Marks: 80**

**Min. Passing Marks Main : 26**

**Min. Passing Marks Back: 24**

*Instructions to Candidates:*

*Attempt any five questions, selecting one question from each unit. All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly.*

*Units of quantities used/calculated must be stated clearly.*

*Use of following supporting material is permitted during examination.  
(Mentioned in form No. 205)*

1. NIL

2. NIL

**UNIT - I**

Q.1 (a) Explain Handoff management in mobile data communication with suitable diagram. [8]

(b) List out the advantages and disadvantages of Infrared and Radio Wave communication. [8]

**OR**

Q.1 (a) What is multipath and fading? Explain the effect of fading and multipath propagation in mobile communication. [10]

(b) Compare 1G, 2G and 3G. [6]

## UNIT – II

- Q.2 (a) 'The frequency reuse concept led to the development of cellular technology'. Explain the essential characteristics of this reuse of frequency with respect to GSM. [8]
- (b) Differentiate between Hidden node problem and Exposed node problem in wireless communication. How it can be solved? [8]

OR

- Q.2 (a) How is localization, location update, roaming etc done in GSM and reflected in the data bases? What are the typical roaming scenarios? rtuonline.com [8]
- (b) Explain GPRS Architecture Reference Model with suitable diagram. [8]

## UNIT – III

- Q.3 (a) Describe the important features of wireless LAN technology. [8]
- (b) Explain Bluetooth protocol stack with suitable diagram. [8]

OR

- Q.3 (a) Explain the terms with respect to IEEE 802.11 LAN standard - [10]
- (i) Station
  - (ii) Access Point
  - (iii) Basic Service Set
  - (iv) Distributed System
  - (v) Extended Service Set
- (b) Compare Ad-HOC and Infrastructure mode of WLAN. [6]

## UNIT – IV

- Q.4 (a) In mobile IP, how data will be routed if mobile node moves to foreign network? Explain with suitable diagram. [8]
- (b) What are the differences between AODV and standard distance vector algorithm? [8]

**OR**

- Q.4 (a) Explain the following terms with respect to mobile IP entities - [8]
- (i) Home Network
  - (ii) Home Address
  - (iii) Foreign Agent
  - (iv) Home Agent
- (b) Explain the following terms with respect to mobile transport layer - [8]
- (i) Snooping TCP
  - (ii) Selective Retransmission
  - (iii) Implications of Mobility in Traditional TCP
  - (iv) Transmission / Time-Out Freezing

**UNIT - V**

- Q.5 (a) Which properties of HTTP waste Bandwidth? What is additional problem using HTTP 1.0 together with TCP? How does HTTP 1.1 improve the situation? [10]
- (b) What is WAP push? How is push different from pull? [6]

**OR**

- Q.5 Write short notes on the following (any four) - [4×4=16]
- (a) WWW
  - (b) WML Script
  - (c) Wireless Application Environment
  - (d) MIO - NFS
  - (e) WAP (Wireless Application Protocol)