

C 44805

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Name.....

Reg. No.....

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE
[SUPPLEMENTARY] EXAMINATION, JUNE 2013**

CS 04 804 (E)/IT 04 802—MOBILE COMMUNICATIONS SYSTEMS

(2004 Scheme)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all the questions.

1. (a) Classify the mobile radio transmission systems.
- (b) Define Base station and Mobile station.
- (c) Why and when are different signaling channels needed ?
- (d) What characteristics do the different orbits have ?
- (e) What are the basic differences between wireless WANs and WLANs ?
- (f) Specify the advantages and disadvantages of Handoff-Aware Wireless Access Internet Infrastructure (HAWAII).
- (g) Can the problems using TCP be solved by replacing TCP with UDP ? Give reason.
- (h) Write a program in WML to display the different variety of car in a car showroom.

(8 × 5 = 40 marks)

Part B

With choice, answer any one.

2. (a) Explain in detail, how a call to a Mobile User initiated by a landline subscriber.
(15 marks)

Or

- (b) Is a directional antenna useful for mobile phones ? Why ? How can the gain of an antenna be improved ?
(15 marks)

3. (a) Describe the functions of the MS and SIM. Why does GSM separate the MS and SIM ? How could the position of an MS be localized ?
(15 marks)

Or

- (b) What special problems do customers of a Satellite System with mobile phones face if they are using it in big cities ? Why is there hardly any space in space for GEOs ?
(15 marks)

Turn over

4. (a) Illustrate the advantages and disadvantages of WLAN, Infra red and Radio waves. (15 marks)

Or

- (b) Explain packet flow if two mobile nodes communicate and both are in foreign networks. What additional routes do packets take if reverse tunnelling is required ? (15 marks)

5. (a) Explain the WAP architecture, its protocol and components. (15 marks)

Or

- (b) Assume all stations can hear all other stations. One station wants to transmit and senses the carrier idle. Why can a collision still occur after the start of transmission ? (15 marks)

[4 × 15 = 60 marks]