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CS/B.Tech(CSE-NEW)/SEM-7/CS-704E/2013-14 2013 MOBILE COMPUTING

Time Allotted: 3 Hours

Fud Murks: 70

The flyures in the margin indicate full marks.

Canadates are required to give their answers in their own words as far as practicable.

OROUP - A (Multiple Choice Type Gazatione)

Choose the correct alternatives for the following :

10 × 1 m 10

- i) GSM uses for multiplexing.
 - a) CDMA

b) TDMA

c) FDMA

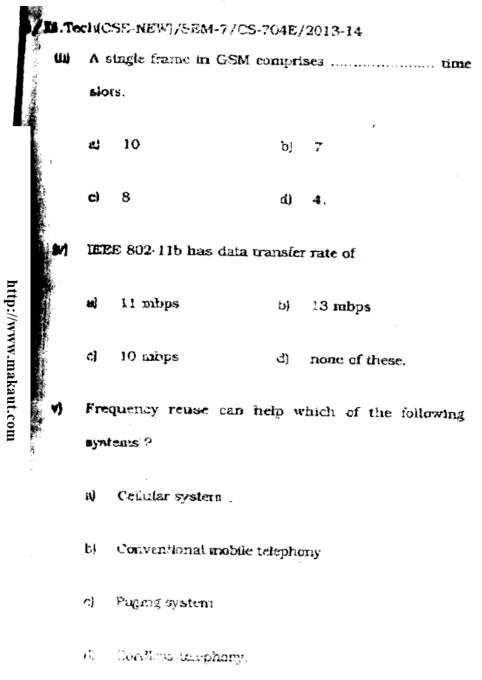
- d) Both (b) and (c).
- - a) Besc station
- o) Cell

e) MSC

d) Mobile station.

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Turn over





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- vi) WAP protocol stack has similarity to
 - a) OSI model
 - b) TCP/IP
 - c) both of these
 - di none of these.
- vii) WLAN Is
 - al infrastructure network
 - b) ad hoc network
 - c) may be either infrastructure or ad hoc network
 - d) none of these.
- will Full form of HSCSD is
 - a) High Spectrum Circuit Switched Data
 - b) High Space Countriel Switched Data
 - 1) Engh Syrod Chouli Swatched Date
 - d. High Guesti Count St Royled Devices

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Tich(C3E-NEW)/SEM-7/CS-704E/2013-14

Ad hee networks are examples of which type of networks?

- Fixed and wired
- b) Mobile and wired
- c) Fixed and wireless
- Mobile and wireless.

If N is the number of cells per cluster then frequency reuse factor of the cellular system is

al N

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b) 1/N

c) N^2

d) none of these.

GROUP - B (Short Asswer Type Guestions)

Answer any three of the following.

 $3 \times 5 = 15$

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What is hand-off? What are the different hand-off strategies? Discuss the merits and demerits of each such attrategy. 1+2+2

What is WAP? Why is it used?

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- What se inpuelling and encapsulation in the context of niebite 🗶 🤋
- What is opread spectrum technique? Name two standard spread spectrum techniques and state the main difference in their principles of operation. 1 + 2 + 2
- What the hidden station problem and exposed station problem in WLAN? How are the problems solved? 2 + 3

GROUP - C [Long Answer Type Questions] Answer any three of the following. $3 \times 15 = 45$

- Define the following terms and state their usage: 5 × 3
 - Near far effect
 - Orthogonal code and its usage in mobile communication
 - FCC c)
 - d) RYC
 - TMS!

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b) http://www.makaut.com

- DS/B/1404C/CS-NEW//SEM-7/CS-704E/2013-14 What is multiple secess technique? Do a computative study AMGO Branch AMOY AMOY MAND 5 + 10
 - What is mount by access control?
 - What are contended based and contendon-free access control mechanisms?
 - Why does CSMA/CD not work for medium access control of WLAN?

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- What is the alternative mechanism of CSMA/CD? Write steps of operation to implement such an alternative 2 + 2 + 3 + 5mechanism.
- Draw the system architecture of GSM and explain the functionality of HLR and VLR.
 - Describe the architecture of a 3G network. What are the various services associated with a 30 network?
 - Define packet seatching and circuit switching, 5 + 6 + 5

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Write short notes on any three of the following: 3 × 5

- a) Wireless local loop
- b) Call setup of GSM network for mobile-to-mobile call
- c) Pervasive computing
- d) GPRS
- e) tridium satellite system.

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