

# END TERM EXAMINATION

SIXTH SEMESTER [BCA] MAY-JUNE 2016

Paper Code: BCA 304

Subject: Mobile Computing

Time : 3 Hours

Maximum Marks :75

Note: Attempt any five questions including Q.No1 which is compulsory.

- Q1. Answer the following:
- a) Explain any two types of antenna used in wireless transmission. (2)
  - b) Explain the path loss of radio signals. (2)
  - c) Explain how spread spectrum avoids narrow band interference. (2)
  - d) Define the terms: hidden terminal and exposed terminal. (2)
  - e) Explain the process of inter-cell handover and intra-cell handover. (2)
  - f) Mention the features of mobile internet. (2)
  - g) Explain the features of WML cards and WML deck. (2)
  - h) Mention the role of timer and bookmarks in WML script. (1)
- Q2.
- a) Define the terms related to signal propagation: transmission range, detection range and interference range. (6)
  - b) Explain the occurrence of long term fading and short term fading in multi-path propagation. (4)
  - c) Draw the waveforms of AFSK and APSK, and explain them. (5)
- Q3.
- a) Compare Space Division Multiplexing, Frequency Division Multiplexing and Time Division Multiplexing. Give their respective applications. (4+2=6)
  - b) Explain how MACA avoids hidden terminals and exposed terminals. Give an illustration for each. (4)
  - c) Explain Reservation TDMA access scheme and Polling TDMA access scheme. Give an example for each. (5)
- Q4.
- a) Compare the following: (6)
    - i) SDMA
    - ii) FDMA
    - iii) TDMA
  - b) Draw the system architecture of GSM. Explain its working. (4)
  - c) Explain the process of mobile originated call and mobile terminated call GSM. (5)
- Q5.
- a) Explain the following features in WML: (6)
    - i) Tasks
    - ii) Events
    - iii) Bindings
  - b) Mention any four types of input used in WML. (4)
  - c) Give an example to illustrate table tags and image tags in WML. (5)
- Q6.
- a) Explain WAP architecture. (5)
  - b) Using WML illustrate loop statement and conditional statement. (5)
  - c) Write WML script function to check a valid 10 digit mobile number. For a valid 10 digit number, display the message "correct number", and for invalid number, display the message "wrong number". (5)
- Q7.
- a) Explain WML script Programs. (5)
  - b) Mention any five features of WML Script standard library reference. (5)
  - c) Explain the security and limitations in WAP services. (5)

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