END TERM EXAMINATION

SIXTH SEMESTER [BCA] SEPTEMBER- OCTOBER 2020

Paper Code: BCA-304   Subject: Mobile Computing

Time: 2 Hours   Maximum Marks: 75

Note: Attempt any three questions including Q.no1 which is compulsory.

Q1   Attempt all parts of the following:-   (5x5=25)
    a) What were the reasons behind the implementation of WAP services with WML?
    b) What are the challenges and pitfalls in the making of Mobile Internet?
    c) What do you understand by WML script programs? Also write about the types of pragma.
    d) Differentiate between FDM and SDM.
    e) Mention the features of mobile internet.

Q2   a) Discuss the path Loss in Signal propagation during wireless transmission.   (10)
    b) Write the advantages & disadvantages of all three satellite systems.   (10)
    c) Explain the phenomenon of MACA. Also draw the protocol machines and explain how it avoids Hidden & Exposed and near & far terminal problems.   (5)

Q3   a) Define the following terms:-   (4x5=20)
    (i) Flat fading (ii) Frequency selective fading
    (iii) Coherence Bandwidth (iv) Coherence time.
    b) Explain the term   (5)
    Aloha & Slotted Aloha and differentiate between them.

Q4   a) What do you understand by Mobile Internet. Also write the different types of services for the mobile internet.   (8)
    b) Write a WML script card using <input>, <select> & <option>.   (8)
    c) What do you understand by WML timers, Desks, Templates and Cards? (9)

Q5   a) Explain briefly AFSK & APSK also draw the signal representations.   (8)
    b) Explain:-   (8)
    (i) <access> (ii) <p> (iii) <meta>
    c) Explain in detail all the subsystems of GSM architecture. Also draw the GSM Architecture. https://www.ggsipuonline.com   (9)

Q6   a) Write about the following operators with example   (4x5=20)
    (i) Assignment Operators
    (ii) Bit wise Operator
    (iii) Logical Operator
    (iv) Comma Operator
    b) Write WML script function to check a valid email id. For a valid format, display the message "Correct email", and for invalid email id, display the message "wrong email".   (5)

Q7   a) Write a WML script statement using expression as statements, conditions & Loops.   (8)
    b) Discuss the Handover process in GSM. Also write the reasons of Handover. Discuss the various types of handover.   (8)
    c) Explain the security and limitations in WAP services.   (9)

Q8   Explain the following terms:-   (5x5=25)
    a) Near & far terminals
    b) CDMA (auto correlation & orthogonality)
    c) Difference between TDM and CDM.
    d) Define the terms: hidden terminal and exposed terminal.
    e) Explain the process of inter-cell handover and intra-cell handover.

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