

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 Aloha & Slotted Aloha and differentiate between them. (5)
- 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 & PSK also draw the signal representations. (8)
 - b) Explain:- (8)
 - (i) <access> (ii) <cp> (iii) <meta>
 - c) Explain in detail all the subsystems of GSM architecture. Also draw the GSM Architecture. (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.
