R19

Code No: 864AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, March/April - 2022
MOBILE COMPUTING

Time: 3 Hours   **Max.Marks:75**

Answer any five questions
All questions carry equal marks
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1.a) How the handover decision takes place in GSM depending on receiver signal Strength? Explain.
  b) Explain the applications of Mobile Computing.   [10+5]

2.a) Show with a diagram the steps involved in a mobile terminated call a station calling a mobile station in GSM.
  b) In detail describe the functions and limitations of operating systems in handheld devices.
                                                                                        [8+7]

3.   Describe the various multiple access techniques in detail with neat diagram.   [15]

4.a) Explain how DHCP used for mobility and also how it supports mobile IP.
  b) How can we avoid hidden and exposed terminal problems? Explain in detail.   [8+7]

5.a) Explain in detail different cache invalidation mechanisms.
  b) Explain how congestion control, slow start and fast retransmit mechanisms influence the efficiency of TCP in mobile environment.   [8+7]

6.a) How a packet is delivered in Indirect TCP? Explain.
  b) List the various advantages and disadvantages of I-TCP.
  c) Explain ACID transaction rules that should be maintained by database transactional models to achieve data integrity.   [5+5+5]

7.a) Describe synchronization usage models in mobile applications.
  b) What is selective tuning and indexing? Explain different methods of selective tuning and indexing.   [7+8]

8.a) What is Dynamic source routing protocol? Illustrate an example.
  b) Discuss the challenges and issues in implementing MANETs.   [9+6]

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