Important Instructions:

1) Open this MS-Word document and start writing answers below each respective question given on page 2.
2) Answers the question in the same sequence in which they appear.
3) Provide to the point and concrete answers.
4) First read the questions and understand what is required of you before writing the answer.
5) Attempt the paper yourself and do not copy from your friends or the Internet. Students with exactly similar answers or copy paste from the Internet will not get any marks for their assignment.
6) You can contact me for help if you have any doubt in the above instructions or the assignment questions.
7) All questions must be attempted.
8) Do not forget to write your name, university ID, class and section information.
9) Rename you answer file with your university ID# before uploading to SIC.
10) When you are finished with writing your answers and are ready to submit your answer, convert it to PDF (no MS Word) and upload it to SIC unzipped, before the deadline mentioned on SIC.
11) Do not make any changes to the format provided.
12) Failure in following the above instructions might result in deduction of marks.

Final Exam, Course: - Mobile Computing

Deadline: - Mentioned on SIC   **Marks: - 50**

Program: - BS (CS), BS-SE   **Dated: 24 June 2020**

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Class and Section:8ᵀᴴ A

Q1: Provide the names of 4 challenges that exist in Adhoc Networks.   **(4)**
Ans1:
  - ➢ **Pricing scheme**
  - ➢ **Routing and multicasting**
  - ➢ **Transport layer protocol**
  - ➢ **Addressing and service discovery**
  - ➢ **Security**

Q2: How the nodes in the Adhoc Network know about the changing network topology.   (2)
Ans2: In Ad hoc network the nodes keep the information of nearest nodes and they update there table when any node it adds or removed. The Source broadcast route request RREQ. All node broadcast this massage to their neighbour nodes until it receives by target node. the target note sends RREP in the shortest path to the source all node updates their table according to the RREP.

Q3: Why is it important to minimize flooding of control packets in Adhoc Networks and A
 Ans3: MRP flooding
                   So, multipoint relay minimizes the flooding of broadcast packet in the network by reducing duplicate retransmission in the same region.

Q4: Explain briefly how Mobile Cloud Computing is different than simple mobile computing and simple cloud computing?   (4
  Ans4: mobile cloud computing is the combination of the cloud and mobile computing bring a rich experience to mobile devices for the better performance. cloud computing is standalone term for achieving cloud task easily for example storage application development and simple mobile computing we use the mobile computing and hard ware component for our tasks its dose not involve cloud.

Q5: Explain the term MBaas in your own words?   **(4)**

Ans5: Mobile backend as a service, or MBaas is development that based on cloud technology.it allow you to outsource of the behind the scenes component of your web or mobile application.

Q6: Imaging you visit a completely new city. What kind of services a modern LBS can provide you at your location automatically?   (6)

Ans6: LSB (location based service

Can provide many services if someone movie to a new city LBS can provide useful and needed information to a person which is new to city for example Near restaurant, Near hospitals, School, Near parks etc.

➢ Storage locater
➢ Proximity based service
➢ Travel information
➢ Mobile workforce management

Q7: Use your imagination as to how the following context can be used by a context aware application in mobile computing environment?

(8)

➢ Date/Time
According to the context a system and time for the use should provide by on the system currents user option to change date and night time according to live area of living should be display on screen by design made of user centric approach.
➢ Environment
The environment is key factor in the context system should be focus on the well system react for example in the noisy on the area or at night or at daylight what's behavior different condition for that there is option in phone adjust brightness and warm and cold.

Emotional state
➢ Focus of attention
The system give importance to the attention of user. Through context aware system they can provide some services like phone call or message arrive on the phone flashes for the notification.
➢ Orientation\

➢ User preferences
The system aware the maintain user preference by providing the with certain option such as the mobile phone color density control. Light or dark mode in the phone .
➢ Calendar (events)
➢ Browsing history

Q8: Explain why energy efficiency is important in technologies like Bluetooth and ZigBEE? (4)
Ans8: With all the talks about global warming, the governments, network device manufacturers, networks service providers and users are more concerned about energy efficiency of the wireless devices than before. The reasons for requiring the more energy efficiency in wireless are various, but most of them are worrying about design problem, the policy of green technology, saving the business cost, and final user satisfaction.

Q9: Explain briefly how you use RFID technology at INU on a daily basis when present on the campus? Do you use an active or passive tag?   (4)

Ans9: We are use the RFID technology for the identification of ourselves to enter the campus we use it for the attendance and use the WIZ machine to see our result and other academic activities. we having passing tag.

Q10: Explain how Wearable Computing can be employed in computer gaming?   (5)

Ans1O:

  ➢ Virtual reality

First variable technology we can use the computer gaming for use the real entertainment immersion.

We can use VR for gaming immerse experience in the gaming environment virtually there are many game jacket sensor which we use for real time bullet effect on human there are many technology.

Q11: What kind of facilities and technologies must be present in order to call you own home a Smart Home?   (5)

Ans11: The smart home residential based form the platform use for the computer technology and control the technology and image display and communication through the network to meet automation requirement the entire system provide control the management.

  ➢ The smart home owners control appliances door control the finger print and lights and thermostats are control the mobile devices or tablet and those suppurate the internet Smart home secuare for other home and smart home saving costing.