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| Discipline: <u>Computer</u> | Semester: <u>5th</u> | Name of the Teaching Faculty <u>Surej Kumar Bhatnagar</u> | |
| Subject: <u>mobile computing</u> | No of Days/Week Class Allotted: <u>4</u> | Semester From date: _____ To date: _____ | No. of Weeks: <u>1</u> |

| WEEK | Class Day | Theory Topics |
|------|-----------|--|
| 1 | 1st | Network, features of Networks, Network Devices, Network types. |
| | 2nd | wireless Network, features of a wireless Networks. |
| | 3rd | mobile computing |
| | 4th | characteristics of mobile computing |
| | 5th | |
| 2 | 1st | Application of mobile computing |
| | 2nd | Limitations of mobile computing |
| | 3rd | mobile development framework Introduction, c/s architecture |
| | 4th | N-tive architecture. |
| | 5th | |
| 3 | 1st | N-tive architecture and WWW |
| | 2nd | peer-to-peer architecture |
| | 3rd | mobile agent architecture. |
| | 4th | Advantages and disadvantages of mobile agent architecture. |
| | 5th | |

| WEEK | Class Day | Theory Topics |
|------|-----------|--|
| 4 | 1st | Wireless Transmission, introduction, Signals |
| | 2nd | Period, frequency, Bandwidth |
| | 3rd | Antennas, signal propagation |
| | 4th | Multiplexing |
| | 5th | |
| 5 | 1st | Modulation, Spread Spectrum |
| | 2nd | cellular system. |
| | 3rd | Introduction of medium Access control |
| | 4th | Hidden / Exposed terminals |
| | 5th | |
| 6 | 1st | Basic Access method |
| | 2nd | Near / Far Terminals |
| | 3rd | SDMA, FDMA |
| | 4th | TDMA, CDMA |
| | 5th | |

| WEEK | Class |
|------|-------|
| 7 | |

| WEEK | Class Day | Theory Topics |
|------|-----------|---|
| 7 | 1st | GSM, GPRS |
| | 2nd | IS-95 |
| | 3rd | CDMA-2000 |
| | 4th | W-CDMA |
| | 5th | |
| 8 | 1st | wireless sensor networks Applications, challenges of WSN |
| | 2nd | components of WSN |
| | 3rd | Short message service, initial concept of SMS |
| | 4th | Multimedia Message Service, History of multimedia message service |
| | 5th | |
| 9 | 1st | Technical Description of multimedia service. |
| | 2nd | Multimedia transmission over wireless networks fundamentals |
| | 3rd | characteristics of wireless networks, wireless networking technology. |
| | 4th | multiPath fading, Exam |
| | 5th | |

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| Dicipline: | | Semester: | Name of the Teaching Faculty | |
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| WEEK | Class Day | Theory Topics |
|------|-----------|---------------|
|------|-----------|---------------|

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|----|-----|---|
| 10 | 1st | overview of mobile IP, working with mobile IP |
| | 2nd | mobile IP entities, mobile Agents |
| | 3rd | components of mobile ip, mobile IPv6 features |
| | 4th | mobile IPv6 Address Types |
| | 5th | mobile IPv6 Address |

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|----|-----|---|
| 11 | 1st | mobile IPv6 Address scope |
| | 2nd | mobile IP operation |
| | 3rd | www architecture for mobile computing |
| | 4th | Need of WAP, Benefits of WAP, Examples of WAP |
| | 5th | |

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| 12 | 1st | WAP - Architecture, WAP protocols |
| | 2nd | WML, push-pull based data acquisition |
| | 3rd | I-mode. |
| | 4th | WAP 2.x, Exam. |
| | 5th | |

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| WEEK | Class Day | Theory Topics |
|------|-----------|--|
| 13 | 1st | Introduction of wireless lens and communication |
| | 2nd | Infrared, Radio Frequency |
| | 3rd | IR Advantages and Disadvantages. RF Advantages and Disadvantages. |
| | 4th | Wireless Network Architecture Logical, Types of WLAN |
| | 5th | |
| 14 | 1st | IEEE 802.11, MAC layer, security, Synchronization |
| | 2nd | Power Management, Roaming, Bluetooth - overview |
| | 3rd | Ubiquitous wireless communication. Introduction |
| | 4th | Scenario of mobile communication |
| | 5th | |
| 15 | 1st | Mobile communication Generation 1G to 3G. |
| | 2nd | 3rd Generation mobile communication. Network. |
| | 3rd | Advantages and Disadvantages of. 3rd Generation mobile communication network |
| | 4th | Universal mobile telecommunication system. |
| | 5th | |