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| |  |  |  | | --- | --- | --- | | 13CS32E1 | - | MOBILE COMPUTING | | | | | | | | |
|  |  | |  | | | | |
| Hours / Week | : | 4 | |  | Sessional Marks | : | 40 |
| Credits | : | 4 | |  | End Examination Marks | : | 60 |

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| **UNIT - I** |
| **Wireless Communication Fundamentals**: Wireless transmission: Frequencies for radio transmission, Signals, Antennas, Signal Propagation, Multiplexing, Modulations, Spread spectrum.  Medium Access Control: SDMA, FDMA, TDMA, CDMA. |
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| **UNIT – II** |
| **Telecommunication Systems**: GSM: Mobile services, System architecture, Radio interface, Protocols, Localization and calling, Handover, Security, New data services.  DECT: System architecture, Protocol architecture. |
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| **UNIT – III** |
| **Mobile Network Layer**: Mobile IP: Goals, assumptions and requirements, Entities and terminology, IP Packet delivery, Agent discovery, Registration, Tunneling and encapsulation, Optimizations. Dynamic Host Configuration Protocol, Mobile ad-hoc networks: Routing, DSDV, DSR, Alternative Metrics. |
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| **UNIT – IV** |
| **Mobile Transport Layer**: Traditional TCP: Congestion control, Slow start, Fast retransmit/fast recovery. Classical TCP improvements: Indirect TCP, Snooping TCP, Mobile TCP, Fast retransmit/fast recovery, Transmission/time-out freezing, Selective retransmission, Transaction-oriented TCP. |
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| **UNIT – V** |
| **Mobile Application Layer**: Wireless application protocol: Architecture, Wireless datagram protocol, Wireless transport layer security, Wireless transaction protocol, Wireless session protocol, Wireless application environment, Wireless markup language, WMLScript, Wireless telephony application, Push architecture, Push/pull services. |
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| TEXT BOOKS |
| 1. Jochen Schiller, Mobile Communications, PHI/Pearson Education, Second Edition, 2003. |
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| REFERENCE BOOKS |
| 1. William Stallings, Wireless Communications and Networks, PHI/Pearson Education, 2002. 2. Kaveh Pahlavan, Prasanth Krishnamoorthy, Principles of Wireless Networks, PHI/Pearson Education, 2003. 3. Hazysztof Wesolowshi, Mobile Communication Systems, John Wiley and Sons Ltd, 2002. |