

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: M.TECH/PRE-PHD
BRANCH: ECE

SEMESTER : I/NA
SESSION : MO/19

SUBJECT: EC510 WIRELESS COMMUNICATION & NETWORKS

TIME:3:00 HOURS

FULL MARKS: 50

INSTRUCTIONS:

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) Discuss the process of Agent Discovery in mobile IP. What is Binding request and Binding Update? [3+2]
Q.1(b) Explain Ipv6 user datagram packet with suitable diagram. What are the responsibilities of Network Agent in Snooping TCP? [3+2]
- Q.2(a) How multicarrier multiple access scheme is different from FHSS and FDMA. Explain SDMA and discuss advantages offered by a directional Antenna. [3+2]
Q.2(b) Discuss different variants of CSMA protocol. In which situation a contention based multiple access scheme proves to be a better choice compared to a contention less multiple access scheme? [3+2]
- Q.3(a) Explain working of Wireless Local Loop. Discuss Service Discovery Protocol of IEEE802.15.1 [3+2]
Q.3(b) Describe typical configuration and channel matrix of a MIMO system. Discuss various advantages offered by MIMO technology. [3+2]
- Q.4(a) Explain Cognitive radio cycle. Draw and discuss the conceptual architecture of Software defined radio. [3+2]
Q.4(b) How switched beam antenna is different from adaptive Antenna array? Explain DSSS-PHY PPDU frame for IEEE802.11 [3+2]
- Q.5(a) Explain Authentication procedure used in IEEE802.11. What are the Components and topologies used in IEEE802.15.4. [3+2]
Q.5(b) Discuss Dual band Impulse radio spread spectrum approach for IEEE802.15.3a. Explain WiMAX Architecture. [3+2]

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