

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

CLASS: M TECH.
BRANCH: CSE/IT

SEMESTER : I
SESSION : MO/19

SUBJECT: EC548 INTRODUCTION TO WIRELESS COMMUNICATION

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) Illustrate the key features of 1G and 3G wireless networks. [5]
Q.1(b) Describe wireless local loop and RFID system. [5]
- Q.2(a) Explain the various channel assignment strategies. [5]
Q.2(b) Briefly describe Hand-off strategies in cellular system. [5]
- Q.3(a) Briefly describe various factors influencing small-scale fading. [5]
Q.3(b) Find median path loss using Okumura's model for $d = 50$ Km, $h_t = 100$ m, $h_r = 10$ m. if EIRP from base station is 1 KW at 900 MHz, find received power. Take $A_{mu}(900 \text{ MHz}(50 \text{ Km})) = 43$ dB and $G_{AREA} = 9$ dB [5]
- Q.4(a) Explain in detail Wi-Max technology. [5]
Q.4(b) Describe about Wireless personal area Network. [5]
- Q.5(a) Why is CDMA more secure than other multiple access techniques? Explain basic operation of CDMA. [5]
Q.5(b) Describe briefly the slotted-ALOHA. [5]

*****25/11/2019*****E