

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

CLASS: M.TECH
BRANCH: ECE

SEMESTER : III
SESSION : MO/19

SUBJECT: EC601 ADVANCED WIRELESS COMMUNICATION

TIME: 3 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) How 5G will be different from 4G? Present a comparative overview of 4G and 5G. [5]
Q.1(b) Discuss the main features of WCDMA. [5]
- Q.2(a) Explain how massive MIMO can help in 5G development. [5]
Q.2(b) What problems will be encountered at mmWave communication? [5]
- Q.3(a) Discuss the concept of smart antenna. How it helps to enhance the system capacity? [5]
Q.3(b) Explain the concept of CRAN. [5]
- Q.4(a) Discuss the wireless mobile environment and the components of the signal received. [5]
Q.4(b) Discuss different types of small scale fading. [5]
- Q.5(a) With the help of a block diagram, explain the operation of OFDM system. [5]
Q.5(b) Explain the concept and benefits of NOMA. [5]

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