

[Time: 3 Hours]

[Marks: 80]

Please check whether you have got the right question paper.

- N.B: 1. Question.No.1 is compulsory.
2. Attempt any three questions from the remaining five questions.

- Q.1 Answer the following: **20**
- What is meant by frequency reuse? What is its effect on the co-channel interference?
 - State the radio specifications of GSM.
 - Compare GSM and CDMA technologies.
 - Explain the terms of soft, softer and soft-softer handoffs.
- Q.2 a) Draw a well labelled diagram and explain in detail the architecture of GSM. **10**
- b) Explain GSM frame and time slot structure with the required figures. **10**
- Q.3 a) Explain CDMA reverse channel processing **10**
- b) Discuss mobility and resource management in CDMA. **10**
- Q.4 a) Explain 4G-LTE architecture with a neat block diagram in detail. **10**
- b) Explain cell splitting. **04**
If the radius of each new microcell is half that of the original cell, show that **06**
- Traffic load increases four times
 - Transmit power must be reduced by 12dB to maintain the S/N requirement with a path loss exponent of 4.
- Q.5 a) Describe UMTS architecture with a neat diagram and interfaces. **10**
- b) Compare 3G and 4G technologies. **05**
- c) Write a detailed note on mobile IP. **05**
- Q.6 Write short notes on: **20**
- WiMax
 - GPRS
 - RFID
 - MANET
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