

# 17632

**15116**

**3 Hours / 100 Marks**

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. a) **Answer any THREE of the following:** **12**
- (i) List various mobile computing functions.
- (ii) State four features of GSM.
- (iii) Describe GSM location update procedure.
- (iv) Explain in brief streams ciphering and block ciphering.
- b) **Answer any ONE of the following:** **6**
- (i) With neat diagram describe steps for VLR failure restoration procedure.
- (ii) Draw and explain life cycle of android activity.

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- 2. Answer any FOUR of the following:** **16**
- a) Write different channel assignment strategies in GSM. Explain in brief.
  - b) Define cell sectoring with its type.
  - c) With neat diagram describe GSM frame structure.
  - d) Describe basic call originating procedure.
  - e) List and explain in short types of bearers services in GPRS.
  - f) With neat diagram describe stepwise procedure to describe AES.
- 3. Answer any FOUR of the following:** **16**
- a) Describe how repeaters are used in the range extension.
  - b) Describe GSM traffic channels with its type
  - c) Write major steps performed in inter\_LA movement.
  - d) List strategies used in implementation of 4G technology.
  - e) Mention the features of window CE.
- 4. a) Attempt any THREE of the following:** **12**
- (i) Define frequency reuse and handoff.
  - (ii) Explain TCH channel coding in GSM signal processing.
  - (iii) Describe various types of attacks in information security.
  - (iv) Compare between symmetric key cryptography with public key cryptography.
- b) Attempt any ONE of the following:** **6**
- (i) With neat labelled diagram explain GSM architecture.
  - (ii) Write steps to develop a user interface with two text box and two buttons.

- 5. Attempt any TWO of the following:** **16**
- a) State various GSM control channels in brief.
  - b) Describe GPRS architecture with neat diagram.
  - c) Write detail procedure of DES algorithm.
- 6. Attempt any FOUR of the following:** **16**
- a) Describe micro cell zone concept.
  - b) Write algorithm for call termination of VLR overflow.
  - c) Describe HLR restoration procedure.
  - d) With neat diagram explain any two data burst in GSM frame.
  - e) Write note on UMTS in 3G and 4G technologies.
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