

17632

15162

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
  - (6) Write any special instructions if any.
  - (7) Preferably write answers in sequential order.

**Marks**

1. (A) Attempt any **THREE** of the following : **12**
  - (i) Describe a micro cell zone concept.
  - (ii) List and describe briefly GSM channel type.
  - (iii) Describe mobility management.
  - (iv) Explain types of attacks in detail.

(B) Attempt any **ONE** of the following : **6**

  - (i) Write call cancellation algorithm of VLR overflow.
  - (ii) Describe Android Life-cycle activity.
2. Attempt any **FOUR** of the following : **16**
  - (a) Describe channel assignment strategies.
  - (b) Draw and describe handoff strategies.
  - (c) List and describe GSM services.
  - (d) Explain HLR failure restoration method.
  - (e) List and describe briefly data services in GPRS.
  - (f) List the components of Information Security and state features of each.

**P.T.O.**

- 3. Attempt any FOUR of the following : 16**
- (a) Describe cell splitting and sectoring for improvement of coverage area.
  - (b) Explain GSM frame structure with neat diagram.
  - (c) Describe GSM location updates inter LA movement.
  - (d) Describe GPRS Network operations.
  - (e) Draw and describe Android architecture.
- 4. (A) Attempt any THREE of the following : 12**
- (i) Describe channel assignment types for wireless systems.
  - (ii) List the features of GSM.
  - (iii) Draw neat diagram and explain 3G PP security architecture.
  - (iv) Describe symmetric key cryptography with its components.
- (B) Attempt any ONE of the following : 6**
- (i) Describe location tracking and call setup in GSM.
  - (ii) Compare similarities, differences and unique features of Windows CE and Android mobile operating systems.
- 5. Attempt any TWO of the following : 16**
- (a) Explain the process of GSM to PSTN call and PSTN to GSM call.
  - (b) Describe the applications and limitations of GPRS.
  - (c) What is public key cryptography and what are its components ? Explain the Diffie-Hellman Algorithm.
- 6. Attempt any FOUR of the following : 16**
- (a) Describe three-tier mobile computing architecture.
  - (b) Describe signal processing in GSM.
  - (c) Describe VLR Identification algorithm.
  - (d) Describe the Registration algorithm of GSM/VLR.
  - (e) Describe CDMA 2000 technology.
-