

17632

11819

3 Hours / 100 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (6) Preferably write answers in sequential order.

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|-----------|---|--------------|
| 1. | (A) Attempt any THREE of the following : | 12 |
| | (a) State the advantages of using Repeaters. | |
| | (b) List the features and services of GSM. | |
| | (c) State the information stored in HLR & VLR. | |
| | (d) Explain the components of information security. | |
| | (B) Attempt any ONE of the following : | 6 |
| | (a) Explain HLR failure restoration method. | |
| | (b) Describe the life cycle of Android Activity. | |
| 2. | Attempt any FOUR of the following : | 16 |
| | (a) Describe the techniques to improve coverage and capacity in Cellular System. | |
| | (b) With the help of neat diagram, describe the concept of Co-channel Interference. | |
| | (c) State the types of GSM channels. | |
| | (d) Describe the Registration Algorithm of VLR overflow. | |
| | (e) State and describe the bearer services in GPRS. | |
| | (f) Compare between public key Cryptography and Symmetric key Cryptography. | |

- 3. Attempt any FOUR of the following :** **16**
- (a) State the features and limitations of 2G.
 - (b) Describe the process of GSM to PSTN call.
 - (c) Describe the inter-MSC movement in GSM location update.
 - (d) State the advantages of 4G for network operators and end users.
 - (e) Compare between Symbian OS and Android mobile operating system.
- 4. (A) Attempt any THREE of the following :** **12**
- (a) Describe hand off strategies.
 - (b) Define the following identifies :
 - (i) IMSI (ii) IMEI (iii) TMSI (iv) MSISDN
 - (c) Explain the multifactor security.
 - (d) Explain the security features added in 3GPP.
- (B) Attempt any ONE of the following :** **6**
- (a) Describe the signal processing in GSM.
 - (b) Draw and describe Android Architecture.
- 5. Attempt any TWO of the following :** **16**
- (a) Describe the architecture of GSM.
 - (b) Describe UMTS technology in detail.
 - (c) Write detail procedure of DES Algorithm.
- 6. Attempt any FOUR of the following :** **16**
- (a) Describe the concept of frequency reuse with neat sketch.
 - (b) Describe the call setup in GSM.
 - (c) Explain the VLR Identification algorithm.
 - (d) Describe the Call Origination Algorithm of VLR overflow.
 - (e) Describe the GPRS Network modes.
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