

17632

11718

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) Assume suitable data, if necessary.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. (a) Answer any **THREE** of the following :

4 × 3 = 12

(i) Describe any four mobile computing functions.

(ii) List and describe different types of GSM traffic channel.

(iii) What is location area (LA) ? Describe any three situation when GSM location area update is performed.

(iv) Describe on stream ciphering and block ciphering with reference to Mobile Security.

(b) Answer any **ONE** of the following :

6 × 1 = 6

(i) Write call registration algorithm of VLR overflow.

(ii) With neat diagram describe android architecture.

2. Answer any FOUR of the following :**4 × 4 = 16**

- (a) Classify channel assignment strategies and explain.
- (b) Explain co-channel & adjacent channel interference.
- (c) Draw a block diagram and explain voice signal processing in GSM.
- (d) Explain HLR failure restoration method.
- (e) List any two applications and limitations in GPRS.
- (f) Define private key cryptography and describe components of it.

3. Answer any FOUR of the following :**4 × 4 = 16**

- (a) With neat labelled sketch describe the microcell zone concept.
- (b) Draw a neat labelled diagram of GSM frame structure and describe it.
- (c) What are databases involved in mobility management describe it.
- (d) Describe attachment & detachment procedure in GPRS network.
- (e) Explain life cycle of android activity with neat labelled diagram.

4. (a) Answer any THREE of the following :**4 × 3 = 12**

- (i) Define frequency reuse and state its two advantages.
- (ii) State any four features of GSM.
- (iii) Explain Diffie Helman algorithm with suitable example.
- (iv) Write stepwise procedure of DES algorithm.

(b) Answer any ONE of the following :**1 × 6 = 6**

- (i) Describe location tracking, call set up procedure in GSM.
- (ii) Explain feature of Windows CE & Symbian.

5. Attempt any TWO of the following :

8 × 2 = 16

- (a) Draw GSM architecture and describe sub-system involved in it.
- (b) With neat labelled diagram. Explain GPRS architecture with supporting nodes.
- (c) Explain security framework for mobile environment with neat sketch.

6. Attempt any FOUR of the following :

4 × 4 = 16

- (a) Describe three-tier mobile computing architecture.
 - (b) Write the example of GSM call to PSTN call.
 - (c) Write the GSM location updating procedure.
 - (d) Explain call termination algorithm for VLR overflow.
 - (e) Describe data services used in GPRS.
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