21718

3 Hours / 100 Marks   Seat No. ☐☐☐☐☐☐☐☐

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)   Assume suitable data, if necessary.

(6)   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**

(a)   List four mobile computing devices and state the function of two mobile computing devices.

(b)   State four features of GSM.

(c)   Describe the stepwise procedure for HLR Restoration.

(d)   List four component of information security. State the feature of each.

(B)   Answer any ONE of the following :   **06**

(a)   Describe the stepwise procedure for GSM location update under the case inter LA movement with neat diagram.

(b)   Draw the neat diagram of Life Cycle of Android activity and explain.

2. **Answer any FOUR of the following :** 16

   (a) With neat diagram describe the handoff strategies. State the types of handoffs.

   (b) Define frequency re-use and state two advantages.

   (c) Describe the process of GSM to PSTN call.

   (d) Describe the mobility databases HLR and VLR.

   (e) State four applications of GPRS.

   (f) Explain Deffie-Hellman Algorithm.

3. **Answer any FOUR of the following :** 16

   (a) Describe the concept of co-channel interference.

   (b) With neat diagram describe the GSM Frame Structure.

   (c) Describe the step-by-step procedure for VLR Restoration.

   (d) State four features of UMTS.

   (e) State various mobile operating systems. Describe Android architecture with neat diagram.

4. **(A) Answer any THREE of the following :** 12

   (a) With the help of neat block diagram, describe the logical function of mobile computing.

   (b) Draw a block diagram and explain speech signal processing in GSM.

   (c) Draw the block diagram of Mobile Security framework and explain.

   (d) Describe mobile VPN.

(B) **Answer any ONE of the following :** 06

(a) Explain Traffic & Control GSM channels along with its sub types and characteristics.

(b) Write the stepwise procedure to create program for user interface in Android.

5. **Answer any TWO of the following :** 16

(a) Draw the neat diagram of GSM system architecture and explain.

(b) With neat diagram describe GPRS architecture.

(c) Explain step-by-step procedure of RSA algorithm.

6. **Answer any FOUR of the following :** 16

(a) Describe microcell zone concept.

(b) Write the procedure for GSM location tracking and call setup.

(c) State the procedure for Mobile originated call in GSM.

(d) Describe VLR overflow control algorithm for Registration.

(e) Describe GPRS network node.

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