

17632

16172

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.

Marks

1. (A) Answer any **THREE** of the following : **12**
- (a) Enlist the mobile computing devices.
 - (b) State any four services of GSM.
 - (c) Write the steps of Inter-MSC movement of location update procedure.
 - (d) Differentiate between symmetric key cryptography & public key cryptography.
- (B) Answer any **ONE** of the following : **6**
- (a) Write the steps for HLR failure restoration procedure.
 - (b) Write steps to develop a User Interface for login (Assume two textboxes labelled as Username & Password and two buttons labelled as Submit and Cancel).
2. Answer any **FOUR** of the following : **16**
- (a) Explain Handoff strategies with neat sketch.
 - (b) Explain microcell zone concept briefly.
 - (c) Define the following identifiers :
 - (i) MSISDN (ii) IMSI (iii) IMEI (iv) TMSI

- (d) Write algorithm for call origination of VLR overflow with neat sketch.
- (e) State applications and limitations of GPRS.
- (f) Explain RSA algorithm.

3. Answer any FOUR of the following :

16

- (a) Explain the techniques for improving coverage and capacity in cellular systems.
- (b) Explain the GSM frame structure.
- (c) Explain VLR Failure Restoration procedure.
- (d) Explain the functions of GPRS support nodes.
- (e) Write features of Android OS.
- (f) Explain UI layouts available in Android environment.

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

12

- (a) Explain Co-channel Interference.
- (b) Explain the sequence of events that takes place during PSTN to GSM call.
- (c) Discuss signal processing in GSM.
- (d) Explain the Information Security Attacks.

(B) Answer any ONE of the following :

6

- (a) Draw and explain GSM channels.
- (b) Explain the life cycle of Android Activity.

5. Answer any TWO of the following :

16

- (a) Explain GSM Architecture in detail with neat sketch.
- (b) Explain GPRS Data Services and Bearer Services.
- (c) Explain 3GPP Security and Smart Card Security.

6. Answer any FOUR of the following :

16

- (a) Explain the role of Repeaters.
 - (b) Describe basic call originating procedure.
 - (c) Explain the functions of HLR and VLR.
 - (d) Explain the events when GSM location update takes place.
 - (e) Explain advantages and disadvantages of 4G.
 - (f) Explain UMTS briefly.
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