

**Scheme – G**  
**Sample Test Paper - I**

**Course Name : Diploma in Information Technology**

**Course Code : IF**

**Semester : Sixth**

**Subject Title : Mobile Computing**

**Marks : 25**

**17632**

**Time : 1 Hour**

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**Instructions**

1. All questions are compulsory.
2. Illustrate your answer with neat sketches wherever necessary.
3. Figures to the right indicates full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

**Q1. Answer Any THREE.**

**(3\*3=9)**

- a) State the two features and two Limitation of 3G Wireless Technology
- b) What is frequency reuse and state its two advantages.
- c) Describe the services provided by the GSM (any 3).
- d) State three functions of mobile computing with example.

**Q2. Answer any TWO.**

**(4\*2=8)**

- a) With the help of neat diagram describe the concept of co-channel interference
- b) With neat diagram describe the GSM Frame structure
- c) Describe the registration process of Mobile system when it is moving from VLR to another VLR.

**Q3. Answer any TWO.**

**(4\*2=8)**

- a) Why power control is required? Give two reasons.
- b) With the help of neat block diagram describe the logical function of mobile computing.
- c) Describe fixed channel assignment and dynamic channel assignment.

**Scheme – G**  
**Sample Test Paper - II**

**Course Name : Diploma in Information Technology**

**Course Code : IF**

**Semester : Sixth**

**Subject Title : Mobile Computing**

**Marks : 25**

**17632**

**Time : 1 Hour**

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**Instructions**

1. All questions are compulsory.
2. Illustrate your answer with neat sketches wherever necessary.
3. Figures to the right indicates full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

**Q1. Answer any THREE.**

**(3\*3=9)**

- a) Write three features of android OS
- b) Describe four component of information security
- c) Describe situation when GSM Location update is performed
- d) Describe the data services used in GPRS

**Q2. Answer any TWO.**

**(4\*2=8)**

- a) Describe the mobility of the database with respect to HLR and VLR
- b) Describe GPRS Network operations
- c) Describe Mobile VPN.

**Q3. Answer any TWO.**

**(4\*2=8)**

- a) With the neat diagram describe life cycle of android activity
- b) What is 3GPP? List its four Technical specification groups
- c) Describe the stepwise procedure for HLR Failure restoration.

**Scheme – G**  
**Sample Question Paper**

**Course Name : Diploma in Information Technology**

**Course Code : IF**

**Semester : Sixth**

**Subject Title : Mobile Computing**

**Marks : 100**

**17632**

**Time : 3 Hours**

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**Instructions**

1. All questions are compulsory.
2. Illustrate your answer with neat sketches wherever necessary.
3. Figures to the right indicates full marks.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.

**Q1(A) Answer any THREE of the following (12)**

- a) List four Mobile computing Devices and state the function of two mobile devices.
- b) State four features of GSM.
- c) Describe situation when GSM Location update is performed.
- d) List four components of information security. State the features of each.

**Q1 (B) Answer any ONE of the following (06)**

- a) Write an algorithm for Call origination of VLR overflow.
- b) With the neat diagram describe android architecture.

**Q2. Answer any FOUR of the following (16)**

- a) Define frequency reuse and state two advantages.
- b) With neat labeled diagram describe the handoff strategies.
- c) List the services provided by the GSM and describe two of them.
- d) Write an algorithm for call Termination of VLR overflow.
- e) State four applications of GPRS.
- f) Write stepwise process of RSA algorithm.

**Q3. Answer any FOUR of the following (16)**

- a) State the two features and two Limitations of 4G Wireless Technology.

- b) Describe the process of GSM to PSTN call.
- c) Describe the step by step procedure for VLR Failure restoration.
- d) State four features of UMTS.
- e) Write a step wise procedure to create program for hello world in android.

**Q4. A) Answer any THREE of the following (12)**

- a) With the help of neat block diagram describe the logical function of mobile computing.
- b) With neat diagram describe the GSM Frame structure.
- c) Describe Diffie-hellman algorithm.
- d) With the neat diagram give stepwise procedure to describe AES.

**Q4. B) Answer any ONE of the following. (06)**

- a) Describe the procedure of Mobile station Registration, call Origination and call termination in GSM.
- b) Write a step wise procedure to create program for user interface in android

**Q5. Answer any TWO of the following (16)**

- a) Mention two types of GSM Channel along with its subtypes. State the characteristics of its subtype.
- b) Describe GPRS network node in detail
- c) With the neat diagram give step by step procedure to describe DES.

**Q6. Answer any FOUR of the following (16)**

- a) Describe Fixed channel assignment and dynamic channel assignment
- b) Describe the registration process of Mobile system when it is moving from one VLR to another VLR.
- c) Write algorithm for cancellation of VLR overflow.
- d) Write the procedure GSM Location updating procedure.
- e) Describe the data services used in GPRS.