

Faculty of Science

End Semester Examination May 2025

FS3EL12 Mobile Forensic

Programme	:	B. Sc. (Hons.)	Branch/Specialisation	:	FS
Duration	:	3 hours	Maximum Marks	:	60

Note: All questions are compulsory. Internal choices, if any, are indicated. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Section 1 (Answer all question(s))				Marks	CO	BL
Q1. Why wireless communication is used?				1	1	2
<input type="radio"/> It enables billions of people to connect to the Internet <input type="radio"/> Makes services more inexpensive		<input type="radio"/> Lowers the cost of network infrastructure <input checked="" type="radio"/> All of the mentioned				
Q2. In a ring topology network, the data flows _____.				1	1	1
<input checked="" type="radio"/> In one direction only <input type="radio"/> In several directions		<input type="radio"/> Away from the tokens on the ring <input type="radio"/> In a direction where the computers in a network are fully functional				
Q3. An android developer notices that their application crashes whenever they rotate the device screen. What is the most likely cause of this issue?				1	2	1
<input type="radio"/> The application does not have internet access <input type="radio"/> The application uses too much memory		<input checked="" type="radio"/> The application is not handling the screen orientation changes properly <input type="radio"/> The device's battery is low				
Q4. In android architecture, which layer directly interacts with hardware?				1	2	1
<input type="radio"/> Application layer <input type="radio"/> Libraries		<input type="radio"/> Application framework <input checked="" type="radio"/> Linux kernel				
Q5. What is the mounting of file system?				1	3	1
<input type="radio"/> Creating of a file system <input checked="" type="radio"/> Attaching portion of the file system into a directory structure		<input type="radio"/> Deleting a file system <input type="radio"/> Removing the portion of the file system into a directory structure				
Q6. File type can be represented by-				1	3	1
<input type="radio"/> File name <input type="radio"/> File identifier		<input checked="" type="radio"/> File extension <input type="radio"/> None of the mentioned				
Q7. Which data file form generally not included the deleted files?				1	4	1
<input checked="" type="radio"/> Logical data <input type="radio"/> Conceptual data		<input type="radio"/> Physical data <input type="radio"/> All of the above				
Q8. Which is not a tool or method for logical data extraction?				1	4	1
<input type="radio"/> File system <input type="radio"/> Advanced logical method		<input type="radio"/> Android backups <input checked="" type="radio"/> Chip-off method				
Q9. Which acquisition method provides more data to the examiner and allows the recovering of the deleted files?				1	5	1
<input type="radio"/> Advanced <input type="radio"/> Logical		<input checked="" type="radio"/> Physical <input type="radio"/> Manual				

Q10. Mobile forensics process is broken down into three main categories-

1 5 1

- Seizure, acquisition, examination/analysis
- Photographing, acquisition, examination/analysis
- Acquisition, examination/analysis, reporting
- Seizure, acquisition, reporting

Section 2 (Answer all question(s))

Marks CO BL

Q11. What is a SIM? Highlight the key role of SIM in mobile forensic.

2 1 2

Rubric	Marks
What is a SIM	1
Highlight the key role of SIM in mobile forensic.	1

Q12. Write a note on "History of Mobile device".

3 1 2

Rubric	Marks
History of Mobile device 4-5 point.	3

Q13. (a) What are SQLite databases? Describe some features of SQLite database.

5 1 2

Rubric	Marks
What are SQLite Databases	2
some Features of SQLite Database, 3-4	3

(OR)

(b) What is communication topology. Explain the various types of network topologies.

Rubric	Marks
What is Communication Topology.	1
Explain the various types of Network Topologies, 5-6 type	4

Section 3 (Answer all question(s))

Marks CO BL

Q14. Categorize the detailed architecture of android, with diagram.

3 2 2

Rubric	Marks
Architecture of android (detailing 5 categories)	3

Q15. (a) Describe the update mechanism of android & also expand several stages of android update (OTA update, A/B seamless update). What are the factors affecting update speed?

7 2 2

Rubric	Marks
Describe the update mechanism of Android	3
several stages of Android update (OTA update, A/B seamless update).	3
factors affecting update speed	1

(OR)

(b) Briefly describe the android market & its history? Also write some differences between android market & google play store.

Rubric	Marks
Describe the Android Market & its History	2
difference between Android Market & Google Play Store.	5

Section 4 (Answer all question(s))

Marks CO BL

Q16. What do you understand by mounting of a file system. Explain process of mounting in different OS.

3 3 2

Rubric	Marks
Mounting of a file system	1
process of mounting in different OS.	2

Q17. (a) What is directory structure? Describe the types of directories with their advantages & disadvantages in file system with respective directory diagram.

7 3 2

Rubric	Marks
What is Directory Structure.	1
Describe the types of directories.(5 types)	3
their advantages & disadvantages. (individually)	3

(OR)

(b) What do you understand by android forensic technique. Describe the key techniques used for conducting an investigation on an android device.

Rubric	Marks
Android forensic technique.	1
the key techniques used for conducting an investigation on an android device.(4-5techniques)	6

Section 5 (Answer all question(s))

Marks CO BL

Q18. Write the difference between software acquisition & hardware acquisition.

4 4 2

Rubric	Marks
difference between software acquisition & hardware acquisition. (4-4 points in each acquisition)	4

Q19. (a) Briefly explain the chip-off technique & JTAG technique used in mobile forensic.

6 4 1

Rubric	Marks
Chip-off technique, introduction, Procedure	3
JTAG technique, Procedure, introduction,	3

(OR)

- (b)** What do you understand by sever acquisition/ cloud acquisition services in forensic? What are the common tool for data acquisition?

Rubric	Marks
sever acquisition/ cloud acquisition services in forensic.	4
What are the common tool for data acquisition.	2

Section 6 (Answer any 2 question(s))

Marks CO BL

5 5 1

Q20. What are some common procedure for acquiring an android device for forensic purpose?

Rubric	Marks
some common procedure for acquiring an android device (5-6 procedure).	5

Q21. Describe the imaging process of an android device.

5 5 1

Rubric	Marks
Imaging process of an Android Device.	5

Q22. List out some common mobile forensic analysis techniques used for investigation.

5 5 1

Rubric	Marks
mobile forensic analysis techniques (5 techniques).	5
