

Crimson College of Technology
Internal Exam

Level: Bachelor
Programme: BCIS VIII
Course: Mobile Computing

Year: 2025
Full Marks: 50
Time: 2:00 Hrs

Candidates are required to give their answers in their own words as practical as possible. The figures in margin indicate full marks.

Attempt all questions.

Section "A"

Short Answer Questions

(2*5=10)

1. Explain Class and object in java. What is inheritance? Explain any one type.
2. Define Manifest File with its purpose.

Section "B"

(3*10=30)

3. What is Activity? Explain Activity life cycle with diagram.
4. Define Intent? Explain implicit intent and explicit intent with examples.
5. Define Broadcast receiver class. Explain Toast class with sample code.
6. Define layout manager. Explain relative and constraint layout.

Section "C"

(1*10=10)

6. Pokhara University recently launched a mobile application aimed at helping students access academic information such as class schedules, exam timetables, internal marks, and digital library services. Although the app was designed to serve over 10,000 students across multiple campuses, it faced several issues post-launch. Students complained about poor navigation, slow loading times, and inconsistent design across different devices. It was later discovered that the app was developed using an HTML5 approach for faster cross-platform deployment, but it lacked native functionality and optimization. The university's IT team is now considering redeveloping the app using a native or hybrid approach with a strong focus on UI/UX design.

- a) Identify the role of UI and UX design in the failure of the Pokhara University mobile app.
- b) Differentiate between Native, HTML5, and Hybrid mobile applications. Which would be the most suitable for a university-wide app and why?
- c) Explain the key components of Android architecture that developers should consider to improve performance and reliability.
- d) Suggest technical and design improvements that could be made in the next version of the university's app.