

## IMSc (CSF) (NEP) Sem.-5 Examination

## DSC-C-ICSF-351T

## Mobile App Dev. and Security

Time : 2-00 Hours]

November-2025

[Max. Marks : 50

**Question 1: Answer the following questions:**

- i. Explain the key features of Java that make it platform-independent. 5 Marks
- ii. Describe encapsulation in detail and explain how it enhances data security. 5 Marks

**OR**

- i. Define polymorphism and discuss its types with examples. 5 Marks
- ii. Explain the importance of OOP principles in Android application development. 5 Marks

**Question 2: Answer the following questions:**

- i. Discuss the importance of modularity and its benefits in software design. 5 Marks
- ii. Describe the top-down and bottom-up design approaches along with their advantages and disadvantages. 5 Marks

**OR**

- i. Describe the Prototype Model and its advantages and disadvantages. 5 Marks
- ii. Compare the Waterfall Model and Incremental Model with their benefits and limitations. 5 Marks

**Question 3: Answer the following questions:**

- i. Explain in detail the difference between JVM and DVM based on their functionality, file types, and optimization. 5 Marks
- ii. Explain the architecture of the Android operating system in detail 5 Marks

**OR**

- i. Discuss secure coding practices used in mobile application development. 5 Marks
- ii. What is app sandboxing? Describe its role in mobile security. 5 Marks

**Question 4: Answer the following questions:**

- i. Explain the types of Android menus with examples. 5 Marks
- ii. What is a Bitmap? Explain its advantages, disadvantages, and optimization techniques 5 Marks

**OR**

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- i. Explain Android Text-to-Speech (TTS) and its real-world applications in 5 Marks accessibility and smart assistants.
- ii. Discuss the role of Bluetooth, Wi-Fi, and NFC in building connected Android 5 Marks ecosystems with examples.

**Question 5: Attempt any ten out of Twelve.**

10 Marks

1. What is the purpose of a context menu in Android?
2. What is an Intent in Android?
3. Define Geocoder
4. What does JVM stand for?
5. Mention one secure coding practice.
6. What is the main goal of software design?
7. Define cohesion in software design.
8. What does SDLC stand for?
9. Name any one phase of the Requirement Analysis process.
10. What does "WORA" stand for in Java?
11. Which keyword is used for inheritance in Java?
12. What is an interface in Java?

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