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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA**

**(An Autonomous Institute Affiliated to AKTU, Lucknow)**

**B.Tech**

**SEM: IV - THEORY EXAMINATION (2022-2023 )**

**Subject: Mobile Application Development**

**Time: 3 Hours**

**Max. Marks: 100**

**General Instructions:**

**IMP:** Verify that you have received the question paper with the correct course, code, branch etc.

**1.** This Question paper comprises of **three Sections -A, B, & C.** It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

**2.** Maximum marks for each question are indicated on right -hand side of each question.

**3.** Illustrate your answers with neat sketches wherever necessary.

**4.** Assume suitable data if necessary.

**5.** Preferably, write the answers in sequential order.

**6.** No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

**SECTION A**

**20**

**1. Attempt all parts:-**

- |      |  |   |
|------|--|---|
| 1-a. | Interference in frequency bands may lead to (CO1)  | 1 |
|      | (a) Cross talk<br>(b) Missed calls<br>(c) Blocked calls<br>(d) All of the above                                    |   |
| 1-b. | Which of the following is not an application of a third generation network? (CO1)                                  | 1 |
|      | (a) Global Positioning System (GPS)<br>(b) Video conferencing<br>(c) Mobile TV<br>(d) Downloading rate upto 1 Gbps |   |
| 1-c. | In which state the activity is, if it is not in focus, but still visible on the screen? (CO2)                      | 1 |
|      | (a) Stopped state  |   |

- (b) Destroyed state
  - (c) Paused state
  - (d) Running state
- 1-d. In Android studio, which of the following callback is called when an activity starts interacting with the user? (CO2) 1
- (a) onDestroy
  - (b) onCreate
  - (c) onResume
  - (d) onStop
- 1-e. Which of the following is the parent class of service? (CO3) 1
- (a) context
  - (b) object
  - (c) contextThemeWrapper
  - (d) contextWrapper
- 1-f. The \_\_\_ format was developed by IBM and Microsoft. (CO3) 1
- (a) AVI
  - (b) MIDI
  - (c) MPEG
  - (d) WAVE
- 1-g. Android is built upon which of the following: (CO4) 1
- (a) J2EE
  - (b) J2SE
  - (c) J2ME
  - (d) Python3.0
- 1-h. SQLite is an in-process library that implements (CO4) 1
- (a) self-contained
  - (b) serverless
  - (c) zero-configuration
  - (d) All of the above
- 1-i. Original name of iOS was (CO5) 1
- (a) Iphone OS
  - (b) IOS
  - (c) IPad OS

- (d) iPod OS
- 1-j. SSO stands for (CO5) 1
- (a) Single Sign on
- (b) Single Signature On
- (c) Signal sign on
- (d) Signal signature on

**2. Attempt all parts:-**

- 2.a. Compare the performance of web application and mobile application. (CO1) 2
- 2.b. Explain android ecosystem and ActivityCreator. (CO2) 2
- 2.c. Define and explain Multimedia Supported audio and video format. (CO3) 2
- 2.d. Why the library module 'android.os.Bundle' imported for android app development? Explain the testing protocols in android. (CO4) 2
- 2.e. Explain swift for server and touch frameworks. (CO5) 2

**SECTION B**

**30**

**3. Answer any five of the following:-**

- 3-a. Write down the full form and explain the meaning of the various extensions used in mobile development? (CO1) 6
- a. Apk
- b. Phone
- c. Mobile
- d. Exe
- e. IPA
- f. Prc
- 3-b. Decode MOBILE. Name the processors used for mobile and handheld devices. (CO1) 6
- 3-c. Discuss about configuring the android SDK and AVD. Write steps involved in setting up android. (CO2) 6
- 3-d. Explain the features of Android with layered architecture of android. (CO2) 6
- 3.e. How can you use Date picker option in android and write the code of it? (CO3) 6
- 3.f. Discuss about the android testing based on size or degree of isolation. (CO4) 6
- 3.g. What mechanisms does iOS provide to support multi-threading? (CO5) 6

**SECTION C**

**50**

**4. Answer any one of the following:-**

- 4-a. Explain End to End Flow of a hybrid Mobile Apps with suitable diagram.(CO1) 10

- 4-b. Briefly explain SoC architecture. Write down the characteristics and types of mobile applications. (CO1) 10

**5. Answer any one of the following:-**

- 5-a. What is the difference between a class and an object? How it is created in android? (CO2) 10
- 5-b. Which file is considered as managing file in Android application? Explain each node of that file in detail. (CO2) 10

**6. Answer any one of the following:-**

- 6-a. Define Bluetooth? Explain with the help of code the interfacing of bluetooth and android. (CO3) 10
- 6-b. Define Emulators. Discuss the role of emulators in Mobile applications with example code. (CO3) 10

**7. Answer any one of the following:-**

- 7-a. Define android applications. Explain publishing applications on android market. (CO4) 10
- 7-b. Define the terms: Install time, normal, signature, runtime, and special android permissions. (CO4) 10

**8. Answer any one of the following:-**

- 8-a. Explain how to integrate calendar and address book with social media application in iOS. (CO5) 10
- 8-b. Explain briefly the concepts of Data persistence using Core Data and SQLite. (CO5) 10