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Total No. of Pages : 02

Total No. of Questions : 09

**MCA (2015 to 2018) (Sem.-4)**  
**MOBILE APPLICATION DEVELOPMENT**  
**Subject Code : MCA-401**  
**M.Code : 74119**

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTIONS-A, B, C & D** contains **TWO** questions each carrying **TEN** marks each and students has to attempt any **ONE** question from each **SECTION**.
2. **SECTION-E** is **COMPULSORY** consisting of **TEN** questions carrying **TWENTY** marks in all.

**SECTION-A**

1. What is a Mobile application? What are its characteristics? Discuss the architecture and working of iOS operating system.
2. Discuss the various enterprise requirements that are addressed in a mobile application.

**SECTION-B**

3. What is Android? Discuss its features and advantages. Elaborate in detail the Android development environment.
4. What do you understand by Mobile Software Engineering? Explain in detail the various phases in mobile software engineering.

**SECTION-C**

5. Discuss the core components of an Android app and how they are put together to create a full-featured app.
6. a) What is meant by multiplatform designs? How is it incorporated?  
b) What is the role of animation and graphics in mobile apps?

**SECTION-D**

7. Give an overview of iOS development environment. Explain in detail the different iOS layers.
8. Discuss the Windows phone environment and its platform.

### SECTION-E

9. Answer the following in brief :

- a) List any four features of Android Studio.
- b) What is Dalvik Virtual Machine?
- c) Give overview of Swift.
- d) What is Android XML?
- e) Write steps for testing methodologies for mobile applications.
- f) List the software required for mobile application development.
- g) Why is mobile development difficult?
- h) What is An Activity?
- i) What are the Sensors used in a mobile App?
- j) What is AVD Manager?

**NOTE: Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**