Roll No.							Total No. of Pages: 0

Total No. of Questions: 09

# MCA (2015 & Onwards) (Sem. – 4) MOBILE APPLICATION DEVELOPMENT

M Code: 74119 Subject Code: MCA-401 Paper ID: [74119]

Time: 3 Hrs. Max. Marks: 60

#### **INSTRUCTIONS TO CANDIDATES:**

- 1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks 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 with each question of TWO marks.

#### **SECTION A**

- 1. Explain the architecture and working of android operating system. (10)
- 2. a) Describe the mechanism of integrating cloud–services, networking and hardware into mobile applications.
  - b) Explain the structure of Android program. (6,4)

### **SECTION B**

- 3. What is Android? Why did we open the android source code? What are the advantages and downsides of android? (10)
- 4. What is Dalvik Virtual Machine? What is use and function of Dalvik virtual machine in Android? (10)

## **SECTION C**

- 5. a) Explain how the lifecycle of an android activity works? (5,5)
  - b) What is intent? How many different intent types are there?
- 6. a) How to design user interface for Multi-platform explain in detail. (5,5)
  - b) What best practices must be followed to ensure that application work on multiple android devices of different screen size, processing power and features?

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### **SECTION D**

- 7. a) What is IOS? Is it an operating system or programming language? Which programming language is used to develop an application in IOS? Explain. (6, 4)
  - b) What are some do's and don'ts in IOS market?
- 8. Discuss in detail about windows phone platform. List steps for building Windows Phone application. (10)

### **SECTION E**

- 9. Write short notes on following with help of example/diagram if needed:
  - a) Scalability of mobile application
  - b) JavaSE
  - c) Difference between an SDK and SDK Manager?
  - d) App Widget
  - e) Swift
  - f) Difference between process and threads.
  - g) List Design Principles for mobile applications.
  - h) Advantages of IOS.
  - i) Downsides of Windows Phone Platform.
  - j) Future of Android.

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