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| Reg No:**Date: 13-04-2019** |

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| **ST. JOSEPH’S COLLEGE (AUTONOMOUS), BANGALORE-27** |
| **MSc COMPUTER SCIENCE - IV SEMESTER** |
| **SEMESTER EXAMINATION: APRIL 2019** |
| **CS 0316 - Android Application Development** |
| **Time- 2 1/2 hrs** |  | **Max Marks-70** |  |

**PART A**

**Answer any SEVEN of the following questions: 7\*10=70 Marks**

1. a) Describe the functions and limitations of operating systems in handheld devices .

b) Explain handover mechanism .

1. a) Write the steps involved in mobile terminated cell in GSM with a neat diagram.

 b) Explain CDMA technique.

 3. Explain the various multiple access techniques with neat diagram.

 4. a) What is Inheritance? Explain the types of Inheritance.

 b) Write a Java program to demonstrate the following

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| Circle |
| Operation OP |
|  double pi |
| Area(int radius) |

|  |
| --- |
| Operation  |
| Square( int n) |

5. What is a Java Interface? Explain the declaration of Interfaces. Create an interface “Drawable” which implements Rectangle and Circle.

6. Explain Exception handling in Java with an example.

7. Explain Android framework along with the creation and set up of Android emulators.

 8. a) Differentiate between Android and IoS operating systems.

 b) Explain the design demand for Android application.

 9. Create an Android App to generate the Electricity bill with the following details:

 Consumer name, Consumer ID , Number of units used.

 Calculate the total amount using the layout properties.