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**MANIPAL UNIVERSITY**  
**SCHOOL OF INFORMATION SCIENCES**

SECOND SEMESTER ME (MEDICAL SOFTWARE/ EMBEDDED SYSTEMS)  
DEGREE EXAMINATION – APRIL / MAY 2016

SUBJECT: MMS 614/ ESD 616.11(ELECTIVE 2) – MOBILE APPLICATION DEVELOPMENT USING  
ANDROID

Wednesday, April 27, 2016

Time: 10.00 – 13.00 Hrs.

Max. Marks: 100

1. a) Explain DVM. How is it different from JVM  
b) What are the advantages of android?  
(5+5 = 10 marks)
2. List and explain the different activity states of an android application (10 marks)
3. With an example explain the implicit intent in android (10 marks)
4. Explain briefly two categories of android service lifecycle (10 marks)
5. What is a layout? Give different types of layout available in android. Explain briefly each of them.  
(2+8=10 marks)
6. With an example explain the spinner View (10 marks)
7. a. What are Content Providers?  
b. Why does Android system need Content Providers?  
(5+5 = 10 marks)
8. How data insertion and update operation can be performed in SQLite database? Provide proper example for both the operations  
(5+5 =10 marks)
9. Explain basic steps to find location of a device using Location Based Service in android?  
(10 marks)
10. What is notification in android? Explain the concept of notification with an example  
(4+6= 10 marks)

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