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Total No. of Printed Pages: 1

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**B. Tech. (CSE) (Semester –6<sup>th</sup>/7<sup>th</sup>)**  
**ANDROID BASED OPERATING SYSTEMS**  
**Subject Code: BECEO1006**  
**Paper ID: [18OE111127]**

**Time: 03 Hours**

**Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A**

**(2 marks each)**

Q1. Attempt the following:

- a Define direct memory access (DMA).
- b Define interrupt in the context of computer systems.
- c Describe the action bar in Android and its significance.
- d What is cache memory, and why is it important?
- e Describe the role of the operating system.
- f Name two functions of an operating system.
- g What is the Android SDK?
- h List the key features of Android.
- i Explain the purpose of an Android Virtual Device (AVD).
- j What is the difference between HTTP and JSON services in Android networking?

**Section – B**

**(5 marks each)**

- Q2. Explain the memory hierarchy in a computer system and its impact on performance.
- Q3. Explain the evolution of operating systems and how they have changed over time.
- Q4. Describe the architecture of Android and its key components.
- Q5. Discuss the methods for managing changes to screen orientation in an Android application.
- Q6. Explain the importance of location-based services in Android applications, with examples of their usage.

**Section – C**

**(10 marks each)**

- Q7. Provide a detailed overview of the operating system structure and its operations, including system calls and system programs.
- Q8. Create a step-by-step guide for developing your first Android application, detailing the tools and processes involved.
- Q9. Explain the concept of multiprocessor and multicore organization in modern computer systems. How do they improve system performance?