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**Second Semester M.Tech. Degree Examination, June/July 2014**  
**Advanced Computer Concepts for Automation**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions.**

- 1 a. Define automation. Explain the types of automation with example. (10 Marks)  
b. Write a note on display adapters and list any four video display modes with their resolution and discuss the impact of resolution on screen. (10 Marks)
- 2 a. Explain any five basic concepts of an object-oriented programming. (10 Marks)  
b. Explain the features of object oriented programming approaches. (06 Marks)  
c. List the applications of oop technology. (04 Marks)
- 3 a. Explain the friend function with an example and list the merits and demerits of using friend function. (10 Marks)  
b. What is inheritance? Explain the various forms of inheritance with example. (10 Marks)
- 4 a. Explain template and exception handling mechanism in C++. (10 Marks)  
b. Discuss the important feature of Java. (10 Marks)
- 5 a. Discuss the characteristics of database management system. (10 Marks)  
b. Draw the E-R diagram BANK database and discuss all the notations used in E-R diagram. (10 Marks)
- 6 a. What are the different types of constraints in DBMS explain with example? (10 Marks)  
b. Explain the concept of database security and dataware house. (10 Marks)
- 7 a. Write a note on multiprogramming and time sharing. (10 Marks)  
b. Explain the distributed OS and batch system. (10 Marks)
- 8 a. Discuss the components of operating system. (12 Marks)  
b. With a neat diagram, explain TCP/IP reference model along with protocols used at each layer. (08 Marks)

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