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10MAR21

**Second Semester M.Tech. Degree Examination, June 2012**  
**Advanced Computer Concepts for Automation**

Time: 3 hrs.

Max. Marks: 100

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

- 1 a. Explain the various elements of an automated system. (08 Marks)  
b. Write a note on display adapters and list any 4 video display modes with their resolution. (08 Marks)  
c. Discuss the importance of computers in automation. (04 Marks)
- 2 a. Compare procedure oriented and object oriented programming approaches. (06 Marks)  
b. List the applications of OOP. (04 Marks)  
c. Mention the characteristic features and benefits of OOP. (10 Marks)
- 3 a. What is inheritance? Explain the various forms of inheritance. (10 Marks)  
b. What is polymorphism? Explain the two different ways of achieving polymorphism. (10 Marks)
- 4 a. Explain the stream concepts in C++. (06 Marks)  
b. Discuss the important features of JAVA. (08 Marks)  
c. Compare JAVA and C++. (06 Marks)
- 5 a. Explain the database languages and interfaces provided by DBMS. (10 Marks)  
b. Draw the E-R diagram for COMPANY database and discuss the various notation used in E – R diagrams. (10 Marks)
- 6 a. Explain three – schema architecture, with the help of neat diagram. (06 Marks)  
b. Explain the logical and physical data independence. (04 Marks)  
c. Mention the characteristics and advantages of DBMS approach. (10 Marks)
- 7 a. Define operating system. Discuss the concepts of multiprogramming, timesharing and distributed type of operating system, with help of diagrams. (10 Marks)  
b. Explain the real time operating system and its two types with their applications. (10 Marks)
- 8 a. Explain the operating system components. (10 Marks)  
b. With the help of neat diagram, discuss the functions of FTP, HTTP, TCP and IP protocols in the TCP/IP protocol model. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.