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12MAR21

Second Semester M.Tech. Degree Examination, June/July 2013

Advanced Computer Concepts for Automation

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1 a. What are the basic types of automation? Explain them with examples. (12 Marks)
b. With a neat sketch, explain the working principle of CRT video display device. (08 Marks)
- 2 a. What are the unique advantages of an object-oriented programming paradigm? (10 Marks)
b. Differentiate between procedure oriented programming and object-oriented programming. (06 Marks)
c. List a few area of application of OOP technology. (04 Marks)
- 3 Explain the following concepts of OOP with simple examples:
a. Inheritance
b. Polymorphism
c. Objects
d. Data abstraction and encapsulation (20 Marks)
- 4 a. Explain templates and exception handling mechanism features of OOP. (12 Marks)
b. Mention the differences between C++ and JAVA. (08 Marks)
- 5 a. Describe the main characteristics of the database approach and how it differs from traditional file systems. (12 Marks)
b. What are the different types of database end users? Discuss the main activities of each. (08 Marks)
- 6 a. Mention the advantages of using the DBMS approach. (10 Marks)
b. Explain the following concepts of database system:
i) Database security
ii) Data ware house (10 Marks)
- 7 a. Explain the goals of an operating system. (08 Marks)
b. Explain the features of distributed and real time operating systems. (12 Marks)
- 8 a. What are the operating system components? Mention the services provided by an operating system. (12 Marks)
b. Explain TCP/IP reference model with the help of protocols used at each layer. Draw the diagram of protocol stack. (08 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.