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Thapar Institute of Engineering & Technology
School of Mathematics and Computer Applications
MCA Ist Year Ist semester, End Semester Exam

Course Title : Information Technology Concepts   Date : 07.12.2006
Course Code : CA- 001   Time : 3 Hours
Instructor   : Rajiv Sharma   MM : 36

Note : Question 6 is compulsory. From Question 1 to 5, attempt any four. All parts of a Question should be done at one place. Assume any logical data with reasoning, if missing.

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1. a) Early computers could handle one program at a time. Modern systems can handle several programs at once. How is it possible? Explain.

   b) What are the primary functions that an operating system performs?

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2. a) What do you mean by local area network? How network topology is helping to have a better network? Explain.

   b) Suppose your organization is not having a local area network. For local data transmission, organization is using public telephone systems. Is it advantageous to have local area network for local data transfer than telephone line system? If yes, then how? Explain.

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3. a) Distinguish between batch processing and interactive computing.

   b) What is backup? What is backup policy? Why is it needed? What types of issues does it deal with?

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4. a) Briefly describe the two terms "sequential access" and "random access". To which kind of storage media each is applicable? Identify the circumstances in which each would be most likely used.

   b) What is the difference between a character printer and a graph plotter? Explain.

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5. a) Suppose you are a system manager in an organization? One project has come to your division for development purpose. Now you are to choose suitable programming language for your current project. Write point wise, on what basis you would choose the same?

   b) The statement, *"Email is an interactive way of communication"*, is true or false. In any case, reason your answer.

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6. Do the following:
   (i) What do you mean by the term – "garbage – in – garbage – out" ?
   (ii) Machine language programs written for one computer will generally not run on another computer with different CPU. Explain why?
   (iii) Can a printer simultaneously support multiple scripts? If no, why? If yes, name few types of printers with this capability.
   (iv) What is internet? How does it help a researcher to do the research?

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