

**BACHELOR IN INFORMATION TECHNOLOGY  
(BIT)**

**Term-End Examination**

**December, 2011**

**00570**

**CSI-01 : COMPUTER PLATFORMS**

*Time : 3 hours*

*Maximum Marks : 75*

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**Note :** *There are two sections in this paper. Section A consists of objective type questions and short answer type questions. Section A is of 30 marks. All the questions from section A are compulsory. Attempt any three questions from section B. Section B carries 45 marks.*

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**SECTION - A**

1. There are 10 objective type questions in this question. Each objective type question has 4 choices. Select the best choice as your answer. If none of the given choices is valid, then mark 0 as your answer. Each objective question carries 1 marks 10x1=10
- (a) The size of virtual memory is
- (i) same as main memory
  - (ii) less than main memory
  - (iii) more than main memory
  - (iv) equals to the size of secondary memory.

- (b) Cryptography can be used for
  - (i) handling data
  - (ii) protecting data
  - (iii) saving data from deletion
  - (iv) all of the above
- (c) A location that is referenced, will be referenced again in future is called :
  - (i) memory reference
  - (ii) partial locality
  - (iii) temporal locality
  - (iv) spatial locality
- (d) To fetch an instruction you need
  - (i) MAR register
  - (ii) MBR register
  - (iii) IR register
  - (iv) All of the above registers
- (e) Which of the following memory is non-volatile but can be accessed randomly.
  - (i) RAM
  - (ii) ROM
  - (iii) Hard disk
  - (iv) Magnetic tape
- (f) This type of operating system allow multiple processes to execute at the same time is \_\_\_\_\_.
  - (i) Serial processing
  - (ii) Batch processing
  - (iii) Multi programming
  - (iv) All of the above
- (g) A laser printer is :
  - (i) a non-impact printer
  - (ii) an impact printer
  - (iii) a character printer
  - (iv) none of the above

- (h) Which of the following is an advantage of distributed operating system :
- (i) Portability
  - (ii) Correctness
  - (iii) Reliability
  - (iv) Complexity
- (i) Which of the following topology is most reliable of the given :
- (i) Bus
  - (ii) Ring
  - (iii) Star
  - (iv) Mesh
- (j) If you are using a telephone, which of the transmission mode is being used by you -
- (i) Simplex
  - (ii) Half duplex
  - (iii) Duplex
  - (iv) Any of the three
2. (a) Define the terms Channel, Band and Bandwidth in the context of computer networks. 3
- (b) "The size of Cache is smaller than main memory, yet it is able to enhance performance." Justify the statement given above. 3
- (c) What is an operating system ? What is a system call in the context of an operating system ? 3
- (d) A computer system is very slow although the processor is very good. List any two possible upgrades. Justify why these upgrades may solve the problem ? 4
- (e) What is Von Neumann architecture ? Describe it with the help of a diagram. 5
- (f) List the names of all the layers of ISO : OSI reference model of computer networks. 2

## SECTION - B

Attempt *any three* questions from the following 4 questions. Each question carries **15 marks**. (numbered from 3 to 6)

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|----|-----|---|---|
| 3. | (a) | What is an Integrated Circuit ? What are the advantages of using Integrated Circuits ?  | 5 |
|    | (b) | Explain any five features of an Operating System that you may use as a user of computer.  | 5 |
|    | (c) | What are the possible security problems for a computer on network ? What is the purpose of a fire wall ?                                | 5 |
| 4. | (a) | What is the role of a motherboard in a personal computer ? What are the different components of a computer ? Explain them briefly.      | 5 |
|    | (b) | What is a network operating system ? How is it different from a distributed operating system ?  | 5 |
|    | (c) | Explain the various steps/stages execution of instruction.  | 5 |
| 5. | (a) | Explain the three head mechanisms. Which of these mechanisms are used by the hard disk ? Define the term access time for the hard disk. | 5 |

- (b) Explain the client-server model that may be used for an operating system. What are the advantages of using this model ? 5
- (c) Differentiate between the following : 5
- (i) Analog versus digital transmission.
  - (ii) Serial versus parallel transmission.
6. Explain the following with the help of an example/ diagram, if needed : 15
- (a) DMA
  - (b) LCD
  - (c) Kernel of an Operating System
  - (d) TCP/IP protocol
  - (e) Ethernet
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