

Code: DC03
Time: 3 Hours

Subject: COMPUTER FUNDAMENTALS
Max. Marks: 100

JUNE 2011

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- The answer sheet for the Q.1 will be collected by the invigilator after 45 Minutes of the commencement of the examination.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.
- Any required data not explicitly given, may be suitably assumed and stated.

Q1.A. Choose the correct or the best alternative in the following:

(2×10)

- a. _____ were used in first generation computers
- (A) Transistors (B) ICs
(C) Valves (D) SSI
- b. One disadvantage of a direct access file is:
- (A) delay in computing storage address
(B) duplication of address location
(C) unused, but available, storage location
(D) all the above
- c. Which of the following is not a part of the CPU
- (A) storage unit (B) arithmetic and logic unit
(C) program unit (D) control unit
- d. The ALU of a computer responds to the commands coming from:
- (A) primary memory (B) control section
(C) external memory (D) cache memory
- e. Usually, which type of computers use the 8-bit code called EBCDIC?
- (A) minicomputers (B) microcomputers
(C) mainframe computers (D) supercomputers
- f. Both computer instructions and memory addresses are represented by:
- (A) character codes (B) binary codes
(C) binary word (D) parity bit

- g. The number of bits required to address a 4K memory are _____
- (A) 6 bits (B) 8 bits
(C) 12 bits (D) 16 bits
- h. The time taken for the read/write head to move to the correct track on the magnetic disk is called
- (A) search delay (B) latency delay
(C) seek time (D) approach time
- i. What is the name of the computer terminal which gives paper printout?
- (A) display screen (B) soft copy terminal
(C) hard terminal (D) plotter
- j. What is the storage capacity of a 5.25 inches double sided ,double density disk having 40 tracks with each track having 9 sectors and each sector storing 512 bytes?
- (A) $40 \times 9 \times 512 \times 2$ KB (B) $40 \times 9 \times 512 / 1024$ KB
(C) $40 \times 9 \times 512 \times 2 / 1024$ Bytes (D) $40 \times 9 \times 512 \times 2 / 1024$ KB

**Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.**

- Q.2** a. Write salient features of fifth generation computers. (8)
- b. Draw a block diagram of basic organization of a computer system and explain about storage unit of this organization. (8)
- Q.3** a. Explain about the functions of various registers commonly used in computers. (8)
- b. Write a note on processor speed of a computer. (8)
- Q.4** a. Name and explain the two file access methods at the operating system level. (8)
- b. Explain the printing mechanism of inkjet printer. (8)
- Q.5** a. A disk pack has 11 plates with 20 read/write heads which can take 400 positions across the disk surface. Each track on a disk surface is divided in to 100 sectors of 512 bytes each.
Determine :
- (i) The number of cylinders in the disk.
(ii) The number of tracks in a cylinder.
(iii) The volume of data at any position of read/write head.
(iv) Total storage capacity (8)

- b. Define access time, seek time, latency and transfer rate of magnetic disk. (4)
- Q.6** a. What is paging? Explain paging mechanism with the help of an example. (4)
- b. Mention the tasks performed by utility programs. (4)
- c. What are the functions of a communication software? (4)
- Q.7** a. Differentiate between flatbed scanner and hand held scanner. (8)
- b. Define vision input system. Write steps involved to recognize an object by vision input system. (8)
- Q.8** a. Define Read Only Memory. Write about different types of ROM used in computers. (8)
- b. When are two processes said to be in a dead locked state. Explain with the help of an example. (8)
- Q.9** a. Write about various addressing methods that can be used to apply formula/functions in MS-EXCEL. (8)
- b. What is the function of EDIT menu of MS-WORD? Write about various options, their functions and the shortcut keys available under this option. (8)