

Roll No.

June 2008

Subject Code—9469

M.C.A. (First Year) EXAMINATION

(5 Years Integrated Course)

MCA-101

COMPUTER FUNDAMENTALS

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) What is Digital Computer ? State the criteria for classification of digital computers and also explain the working of digital computer through its block diagram. 15

(b) Why is binary system used in data representation inside the computer ? Explain briefly. 5

(1-34)

9469 = $\frac{1}{4}$

P.T.O

June 2008

2. (a) Differentiate between the following :
- (i) Virtual memory and Cache memory
 - (ii) Impact and Non-impact printers
 - (iii) Volatile and Non-volatile memory
 - (iv) DRAM and SRAM. $4 \times 4 = 16$
- (b) Write a short note on flash memory. 4
3. (a) Perform the following conversions :
- (i) $(C5B3.F2)_{16} = (?)_8 = (?)_{10} = (?)_2$
 - (ii) $(3421)_8 = (?)_2 = (?)_{10} = (?)_{16}$.
 $6 \times 2 = 12$
- (b) Using 1's and 2's complement method perform the following operations :
- (i) $25 + 15$
 - (ii) $25 - 15$
 - (iii) $25 - 40$
 - (iv) $25 + 40$ $4 \times 2 = 8$
4. (a) Differentiate between the following :
- (i) Linker and Loader
 - (ii) Low Level Language and High Level Language
 - (iii) Compiler and Interpreter
 - (iv) Source Program and Object Program.

J-9469

9469 = 2 / 4 2

June 2008

- (b) Briefly explain structured programming and object-oriented language. 4
5. (a) What is an Operating System ? Describe the components of UNIX operating system. 12
- (b) Explain the following : 8
- (i) Batch Processing
 - (ii) Multiprocessing
 - (iii) Multitasking
 - (iv) Time Sharing.
6. (a) Compare and contrast DOS and Windows OS highlighting their basic characteristics, advantages and limitations. 12
- (b) Explain working of any one input device and one output device. 8
7. (a) Define the term Internet. Discuss any four services provided by Internet. 10
- (b) Define the terms packet switching and circuit switching. Explain their advantages and disadvantages. 10

⁶
June 2008

8. Write short notes on the following :

(a) CDROM

(b) Communication Protocols

(c) Network Topology

(d) Computer Generations

(e) Distributed Computer System. **5×4=20**

9469 = $\frac{4}{4}$