

# **Computer & Programming Fundamentals**

Time : Three Hours]

[Maximum Marks : 90

**Note :-** Question No. 1 is compulsory. Attempt Five questions in all (including compulsory questions), selecting ONE question from each unit.

1. (a) Define Access time.  
(b) Distinguish between soft-copy and Hard-copy output.  
(c) State the characteristics of non-impact printers.  
(d) Distinguish between multiprogramming and multiprocessing.  
(e) Define debugging.  
(f) What is the complexity of selection sort ?  
(g) State advantages of e-mail.  
(h) What are difference between natural and computer languages? 18

## **UNIT - I**

2. (a) Explain various components of computer by drawing a block diagram.  
(b) Distinguish between analog and digital computers.  
(c) Compare Desktop, Laptop and palmtop computers. 18
3. (a) Explain ROM and its types.  
(b) Explain Flash Memory. What are its use and benefits?  
(c) Explain access mechanism of optical disk. 18

## **UNIT - II**

4. (a) Explain the relationship between hardware and software.  
(b) What is a Virus? Describe the characteristics of viruses.

- (e) Distinguish between application and system software. 18
5. Write short notes on :
- (a) Multiprogramming Operating System.
- (b) Time Sharing Operating System. 18

**UNIT - III**

6. (a) Write an algorithm to find the H.C.F. of two numbers.
- (b) Explain various types of errors in a program. 18
7. (a) Distinguish between Compiler and Interpreter.
- (b) Distinguish between machine language and assembly language.
- (c) Write a short note on pseudo code. 18

**UNIT - IV**

8. (a) Write an algorithm of bubble sort.
- (b) Explain binary search by using an example. 18
9. What do you mean by network topology? Discuss various topologies along with advantages and disadvantages of each type of topology. 18