

COMPUTER SCIENCE
PAPER - I (D-9)

Time : 3 Hours

4 Pages

Max. Marks : 50

- Instructions :*
- (1) All questions are compulsory.
 - (2) Figures to the right indicate full mark.
 - (3) Use of any type of calculator not allowed.
 - (4) Draw a neat diagram wherever necessary.

I. (A) Select correct option from the following and rewrite sentences :

(a) LINUX is _____ type of software. 1

- (i) Public
- (ii) Free
- (iii) Shareware
- (iv) Licenced

(b) _____ is collection of fields. 1

- (i) File
- (ii) Record
- (iii) Array
- (iv) Queue

(c) _____ operator cannot be overloaded. 1

- (i) + +
- (ii) +
- (iii) ::
- (iv) >>

(d) _____ tag is used to create a row in table.

- (i) <td>
- (ii) <th>
- (iii) <tr>
- (iv) <tt>

(B) Answer any two of the following

(a) Explain any three features of Windows-98 Operating System. 3

(b) Explain Bubble sort algorithm with suitable example. 3

(c) Explain general structure of HTML Page. 3

2. (A) Answer any two of the following

(a) Explain friend function in C++ with example. 3

(b) Explain linked representation of Binary Tree in memory with suitable example. 3

(c) Explain memory map of single user operating system. 3

(B) Answer any one of the following

(a) Define Operating System. In which categories operating system provide it's services ? 4

(b) What is Constructor and Destructor ? Explain each with the help of suitable example. 4

3. (A) Answer any two of the following

(a) Explain Internal and External fragmentation in memory management of operating system. 3

(b) List any six data structure operations. 3

(c) Define following terms in C++ file handling 3

- (i) ifstream
- (ii) ofstream
- (iii) fstream

(B) Answer any one of the following

(a) What is a Virus ? Write any three infecting methods of Virus. 4

(b) Define Binary Tree. Draw a Tree diagram for following expression 4

$$T = [(a - b - c) + (a + b - c)]^{1/2}$$

4. (A) Answer any two of the following

- (a) Explain time sharing related to process management of operating system. 3
- (b) Explain how a member function is defined outside class with examples. 3
- (c) Write C++ declaration for the following
(i) Array of 10 integers
(ii) Pointer to character variable
(iii) Object of the class test

(B) Answer any one of the following

- (a) Define Linked List. Draw and explain labeled diagram of linked list with 5 nodes.
- (b) What is Polymorphism ? Explain how it is achieved by
(i) Compile time
(ii) Run time 4

5. (A) Solve any two of the following

- (a) Write a C++ program to accept 10 integers in an array and find its sum and average. 5
- (b) Write a C++ function to find surface area of a sphere.
(Hint Surface area of sphere = $A = 4\pi r^2$) 5
- (c) Write code in HTML for following table 5

Subject	Paper-I	Paper-II
Computer	Theory	50
Science	Practical	50

HSC Exam Scheme.

OR

5. Answer any two of the following

- (a) Write a C++ program to accept a sentence of 80 characters and count number of words in a sentence. 5
- (b) Write a class based C++ program to accept two integers and find it's G.C.D.
(Greatest Common Divisor) 5

(c) Write the exact output of the following HTML Code with font specification 5

```
<HTML>
<BODY>
<TABLE border = "3" Cellspacing="10">
<TR>
<TH Colspan = "3" > STREAM <TH>
</TR>
<TR>
<TD> <A href = "Science.html">
SCIENCE </A> </TD>
<TD> <A href = "Commerce.html">
```

```
COMMERCE </A> </TD>
<TD> <A href = "Arts.html">
ARTS </A> </TD>
</TR>
</TABLE> </BODY> </HTML>
```
