DAY - 16 SEAT NUMBER | | | | | |

2020	III	11	1100	V – 234	(E)

COMPUTER SCIENCE
PAPER - I (D-9)

Time : 3 Hours	4 Pages	Max. Marks : 50

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

1. (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) >>

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(d) _____ tag is used to create a row in table. 1

(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

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

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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) Wrie C++ decleration for the following 3

(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 4

(i) Compile time

(ii) Run time

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. https://www.maharashtrastudy.com 5

(b) Write a C++ function to find surface area of a sphere. 5
(Hint Surface area of sphere = A = $4\pi r^2$)

(c) Write code in HTML for following table . 5

Subject		Paper-I	Paper-II
Computer	Theory	50	50
Scieene	Practial	50	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

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(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>
```

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