

**MAHARASHTRA STATE BOARD OF VOCATIONAL EXAMINATIONS, MUMBAI 51.**

1	Name of Syllabus	C.C. in Elements of Computer engineering (101148)																																									
2	Max. No's of Student	25 students.																																									
3	Duration	6 Months																																									
4	Type	Part time																																									
5	No Of Days / Week	6 Days																																									
6	No Of Hours /Days	4 Hrs																																									
7	Space Required	Workshop = 200 Sq feet Class Room = 200 Sq feet TOTAL = 400 Sq feet																																									
8	Entry Qualification	7 th passed																																									
9	Objective Of Syllabus/ introduction	<ul style="list-style-type: none"><li>• To learn theory and practical knowledge in the fields of Computer &amp; ms office.</li><li>• To train the students to acquire skills and mastery in the use of electronic circuits.</li><li>• To train the students to assemble and test the electronic circuits.</li><li>• To train the students to maintenance of Analog and digital electronic equipment.</li></ul>																																									
10	Employment Opportunity	Employment & self employment in IT and computer industry																																									
11	Teacher's Qualification	Diploma/Certificate in concern subject																																									
12	Training System	Training System Per Week <table border="1"><tr><td>Theory</td><td>Practical</td><td>Total</td></tr><tr><td>06 Hours</td><td>18 Hours</td><td>24 Hours</td></tr></table>							Theory	Practical	Total	06 Hours	18 Hours	24 Hours																													
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13	Exam. System	<table border="1"><tr><td>Sr. No.</td><td>Paper Code</td><td>Name of Subject</td><td>TH/PR</td><td>Hours</td><td>Max. Marks</td><td>Mini. Marks</td></tr><tr><td>1</td><td>10114811</td><td>Computer fundamentals</td><td>TH - I</td><td>3 hrs.</td><td>100</td><td>35</td></tr><tr><td>2</td><td>10114821</td><td>Computer fundamentals</td><td>PR - I</td><td>3 hrs.</td><td>100</td><td>50</td></tr><tr><td>3</td><td>10114822</td><td>M.S.Office</td><td>PR - II</td><td>6 hrs.</td><td>200</td><td>100</td></tr><tr><td></td><td></td><td>Total</td><td></td><td></td><td>400</td><td>185</td></tr></table>							Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Mini. Marks	1	10114811	Computer fundamentals	TH - I	3 hrs.	100	35	2	10114821	Computer fundamentals	PR - I	3 hrs.	100	50	3	10114822	M.S.Office	PR - II	6 hrs.	200	100			Total			400	185
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## SYLLABUS

### Theory – I - Computer Fundamentals

Sr. No.	Topic
1.	Basic Electricity, Atomic structure, Types of Material, properties of Conductor, Insulator and Semi-conductor.
2.	Introduction to Computer <ul style="list-style-type: none"><li>• Definition</li><li>• Why it is called a Computer?</li><li>• Difference between Computer &amp; Calculator</li><li>• Applications of Computer in different fields like Education, Engineering, Medicine, Business, Automobile and Mechanical.</li></ul>
3.	History of Computer from Analytical Engine to Laptop..... <ul style="list-style-type: none"><li>• Capabilities and characteristics of a Computer</li><li>• Classification of computer</li></ul>
4.	Functional Block Diagram of a Computer: <ul style="list-style-type: none"><li>• Explanation of each functional block</li><li>• Study of different Input devices</li><li>• Study of various Output devices</li><li>• Study of various storage devices</li></ul>
5.	MS NOTEPAD
6.	MS PAINT
7.	Computer languages <ul style="list-style-type: none"><li>• Machine Languages</li><li>• Assembly Languages</li><li>• High Level Languages</li></ul>
8.	Hardware & Software <ul style="list-style-type: none"><li>• Definition</li><li>• Study of various hardware devices</li><li>• Types of Softwares and their usage</li></ul>
9.	MS DOS: <ul style="list-style-type: none"><li>• Study of Internal Commands</li><li>• Study of External Commands</li></ul>
10.	MS WINDOWS: <ul style="list-style-type: none"><li>• Introduction to Windows</li><li>• Features of MS Windows</li><li>• Merits and De-merits of Windows over MS DOS.</li></ul>

11.	Study of <ul style="list-style-type: none"> <li>• Desktop and its elements</li> <li>• Control Panel</li> <li>• Display properties</li> <li>• My Computer</li> <li>• My Documents ..... etc.</li> </ul>
12.	Computer Programming: <ul style="list-style-type: none"> <li>• Definition</li> <li>• Flow Charts</li> <li>• Awareness of different programming languages</li> </ul>
13.	BASIC Programming <ul style="list-style-type: none"> <li>• INPUT/OUTPUT Commands</li> <li>• Logical and loop commands</li> </ul>
14.	Simple programs  Practice of at least 10 programs
15.	Microsoft Office: <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Importance</li> <li>• Elements of MS Office</li> <li>• Difference between WORD, EXCEL and POWERPOINT</li> </ul>
16.	MS WORD: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• File operations like creating a document, saving, printing, Page setup etc.</li> <li>• Formatting a document, spell-check, inserting tables, auto text etc.</li> <li>• Mail merge and its advantages.</li> </ul>
17.	MS EXCEL: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• File operations like creating a worksheet, saving, printing, Page setup etc.</li> <li>• Formatting, spell-check, inserting rows, columns, worksheets, deleting worksheets,</li> <li>• Inserting charts and its advantages</li> </ul>
18.	MS POWER POINT: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• Creating slides, inserting slides, sorting slides, deleting slides</li> <li>• Slide show</li> <li>• Customization of presentation</li> </ul>
19.	INTERNET: <ul style="list-style-type: none"> <li>• Introduction to Internet</li> <li>• Application and advantages of Internet</li> <li>• E-mail &amp; Chatting</li> </ul>

## PRACTICALS – I - Computer Fundamentals

1. Expected to perform at least 10 Practical each from topic 5 and 6
2. To demonstrate different hardware devices of computer system . Expected to perform at least 10 Practical each from topic 8.

3.	At least 10 practicals on MS NOTEPAD
4	At least 10 practicals on MS PAINT
5	Computer languages <ul style="list-style-type: none"><li>• Machine Languages</li><li>• Assembly Languages</li><li>• High Level Languages</li></ul>
6	At least 10 practicals on Hardware & Software <ul style="list-style-type: none"><li>• Definition</li><li>• Study of various hardware devices</li><li>• Types of Softwares and their usage</li></ul>
7	At least 10 practicals on MS DOS: <ul style="list-style-type: none"><li>• Study of Internal Commands</li><li>• Study of External Commands</li></ul>
8.	At least 10 practicals on MS WINDOWS: <ul style="list-style-type: none"><li>• Introduction to Windows</li><li>• Features of MS Windows</li><li>• Merits and De-merits of Windows over MS DOS.</li></ul>
9.	At least 10 practicals on <ul style="list-style-type: none"><li>• Desktop and its elements</li><li>• Control Panel</li><li>• Display properties</li><li>• My Computer</li><li>• My Documents ..... etc.</li></ul>

## PRACTICAL – II - M.S.Office

1	At least 10 practicals on Computer Programming: <ul style="list-style-type: none"> <li>• Definition</li> <li>• Flow Charts</li> <li>• Awareness of different programming languages</li> </ul>
2.	At least 10 practicals on BASIC Programming <ul style="list-style-type: none"> <li>• INPUT/OUTPUT Commands</li> <li>• Logical and loop commands</li> </ul>
3.	Simple programs  Practice of at least 10 programs
4.	At least 10 practicals on Microsoft Office: <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Importance</li> <li>• Elements of MS Office</li> <li>• Difference between WORD, EXCEL and POWERPOINT</li> </ul>
5.	At least 10 practicals on MS WORD: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• File operations like creating a document, saving, printing, Page setup etc.</li> <li>• Formatting a document, spell-check, inserting tables, auto text etc.</li> <li>• Mail merge and its advantages.</li> </ul>
6.	At least 10 practicals on MS EXCEL: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• File operations like creating a worksheet, saving, printing, Page setup etc.</li> <li>• Formatting, spell-check, inserting rows, columns, worksheets, deleting worksheets,</li> <li>• Inserting charts and its advantages</li> </ul>
7.	At least 10 practicals on MS POWER POINT: <ul style="list-style-type: none"> <li>• Study of applications and features</li> <li>• Creating slides, inserting slides, sorting slides, deleting slides</li> <li>• Slide show</li> <li>• Customization of presentation</li> </ul>
8.	At least 10 practicals on INTERNET: <ul style="list-style-type: none"> <li>• Introduction to Internet</li> <li>• Application and advantages of Internet</li> <li>• E-mail &amp; Chatting</li> </ul>

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