

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">• To learn theory and practical knowledge in the fields of Computer & ms office.• To train the students to acquire skills and mastery in the use of electronic circuits.• To train the students to assemble and test the electronic circuits.• To train the students to maintenance of Analog and digital electronic equipment.																																									
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">• Definition• Why it is called a Computer?• Difference between Computer & Calculator• Applications of Computer in different fields like Education, Engineering, Medicine, Business, Automobile and Mechanical.
3.	History of Computer from Analytical Engine to Laptop..... <ul style="list-style-type: none">• Capabilities and characteristics of a Computer• Classification of computer
4.	Functional Block Diagram of a Computer: <ul style="list-style-type: none">• Explanation of each functional block• Study of different Input devices• Study of various Output devices• Study of various storage devices
5.	MS NOTEPAD
6.	MS PAINT
7.	Computer languages <ul style="list-style-type: none">• Machine Languages• Assembly Languages• High Level Languages
8.	Hardware & Software <ul style="list-style-type: none">• Definition• Study of various hardware devices• Types of Softwares and their usage
9.	MS DOS: <ul style="list-style-type: none">• Study of Internal Commands• Study of External Commands
10.	MS WINDOWS: <ul style="list-style-type: none">• Introduction to Windows• Features of MS Windows• Merits and De-merits of Windows over MS DOS.

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

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

PRACTICAL – II - M.S.Office

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

List of Tools, Machinery, Equipments etc. (Course Code – 101148)

Sr. No.	Name Of Item	Quantity (Nos.)
1	Intel core 2 duo or higher processor, 2 GB RAM, Intel Motherboard, 500 GB Hard Disk, 17” Monitor, Keyboard, Mouse, DVD Combo Drive or latest configuration	08+01 (01 Computer for Teacher)
2	Server	01
3	24 port unmanaged switch	02
4	LAPTOP	01
5	LCD Projector	01
6	Dot matrix printer	01
7	Inkjet printer	01
8	Laser printer	01
9	Scanner	01
10	UPS 5 KVA	01
11	MS Office latest version	01
12	Antivirus latest version	As required
13	Speaker	01
14	ISDN/Broad Band Internet Connection	01
15	Computer Table	09
16	Chair	26
