

1	Name of Course	Certificate Course in Mobile Cum Quartz Watch Repairing (301115)																																															
2	Max. Nos. of Student	25 Students																																															
3	Duration	6 Months																																															
4	Type	Part Time																																															
5	Nos. of Days / Week	6 Days																																															
6	Nos. of Hours /Days	4 Hrs																																															
7	Space Required	Theory Class Room – 200 sqft Practical – 300 sqft																																															
8	Entry Qualification	S.S.C. appeared																																															
9	Objective Of Syllabus/ introduction	1. Knowledge of soldering technique, use of Tools 2. Knowledge of Electronic Components. 3. Ability to read systematic Layouts and wiring diagrams. 4. Awareness of Safety precautions. 5. Maintenance of Quartz watches & various types of Mobiles and various types of calculators.																																															
10	Employment Opportunity	The trainee will either be able to take up job with Agencies which Maintain repair such equipments or with working experience he will be in a position to start his own independent Business.																																															
11	Teacher's Qualification	Diploma in Electronics.																																															
12	Training System	Training System Per Week <table><tr><td>Theory</td><td>Practical</td><td>Total</td></tr><tr><td>6 hrs</td><td>18hrs</td><td>24hrs</td></tr></table>						Theory	Practical	Total	6 hrs	18hrs	24hrs																																				
Theory	Practical	Total																																															
6 hrs	18hrs	24hrs																																															
13	Exam. System	<table><tr><th>Sr. No.</th><th>Paper Code</th><th>Name of Subject</th><th>TH/PR</th><th>Hours</th><th>Max. Marks</th><th>Min. Marks</th></tr><tr><td>1</td><td>30111511</td><td>Theory of Quartz Wall Clock, Mobile and Calculators</td><td>TH</td><td>3 Hrs</td><td>100</td><td>35</td></tr><tr><td>2</td><td>30111521</td><td>Repairing of Quartz Wall Clock</td><td>PR-I</td><td>3 Hrs</td><td>100</td><td>50</td></tr><tr><td>3</td><td>30111522</td><td>Repairing of Mobile and Calculators</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><tr><td></td><td colspan="6"></td></tr></table>						Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Min. Marks	1	30111511	Theory of Quartz Wall Clock, Mobile and Calculators	TH	3 Hrs	100	35	2	30111521	Repairing of Quartz Wall Clock	PR-I	3 Hrs	100	50	3	30111522	Repairing of Mobile and Calculators	PR-II	6 Hrs	200	100			Total			400	185							
Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Min. Marks																																											
1	30111511	Theory of Quartz Wall Clock, Mobile and Calculators	TH	3 Hrs	100	35																																											
2	30111521	Repairing of Quartz Wall Clock	PR-I	3 Hrs	100	50																																											
3	30111522	Repairing of Mobile and Calculators	PR-II	6 Hrs	200	100																																											
		Total			400	185																																											

SYLLABUS

Theory Paper

Sr. No.	Topics Name
	Quartz Watch Repairing
1.	Working principals of Quartz
2.	Type of Integrated Circuit
3.	Steeper Motor System
4.	Train Wheels
5.	Fault Finding and Remedy
6.	Day & Date Mechanism & Its Function
7.	Type of Battery
8.	Overhauling Method
9.	Guarantee of Work
	Mobile Repairing
1	Basic Electronics
2	List of Tools
3	Type of Battery
4	Batteries series and parallel
5	How Quartz, Its Functions
6	Type of Integrated Circuit
7	Coil and Rotor
8	Servicing and oiling
9	Estimation, Marketing, Testing
10	Types of L.C.D. How it is working
11	Types of L.C.D To P.C.B Connection
12	Servicing, Soldering, Estimation
	Calculator Repairing
1.	Type of Calculators
2.	L.C.D. Display Variety
3.	L.C.D. Display and its function
4.	Types of Battery
5.	Working Principal of Calculator
6.	Fault Find Methods
7.	Remedy on Faults

Practical - I

Sr. No.	Topics Name
	Quartz Watch Repairing
1.	Type of Tools
2.	Type of Printed Circuits
3.	Resoldering Practice
4.	Track Repairing Practice
5.	Component Assembly
6.	Continuity of Printed Circuit Board.
7.	On line P.C.B. Test
8.	Coil Test
9.	Coil Insulation Test
10.	Integrated Circuit Test
11.	Quartz Test
12.	Battery Test
13.	Overhauling Practice
14.	Wall Clock/Time Piece Repairing
15.	Wrist Watch Practice
16.	Assembly of New Movement
17.	Setting of Newkey Rod
18.	Assembly & Dismantling Show on computer

Practical - II

Sr. No.	Topics Name
	Mobile Repairing
1	Basic Soldering Practice
2	Mobile Soldering Practice
3	Jumper fixing Practice
4	Component replacement
5	Servicing practice
6	B.G.A. practice
7	Software practice
8	Ring tone, Logo, down load practice
9	How to open the calculator
10	Battery testing
11	L.C.D.cut figures
12	Function of all buttons
13	Carbon track Repairing
14	Integrated circuit soldering
15	P.C.B servicing
16	How to dismantal Quartz watch
17	P.C.B and coil Testing
18	Key rodand button replacement
19	Fixing the new hands adjustment of Day Date.
20	Fault Finding
21	Estimation
	Calculator Repairing
1.	Type of Tools
2.	Types of Printed Circuits
3.	Re-Soldering Practice
4.	Track Repairing Practice
5.	New Component Assembly
6.	Continuity of P.C.B.
7.	On Line P.C.B. Test
8.	Repairing of Carbon Track
9.	Repairing of Push Button
10.	Repairing of LCD Cut Figures
11.	Printed Circuit Servicing
12.	Jumper Practice
13.	Integrated Circuit Resoldering
14.	How to Remove Damaged Screw

List of Tools and Equipments :

Sr. No.	Tools and Equipments	Quantity
1	Hot Air Gun	2
2	Micro Soldering Iron	4
3	Booster	2
4	Screw Driver Set	4
5	Multi Meter	4
6	Magnifying Glass with Lamp	3
7	Multi Charger	3
8	Elma Solution	2 Bottles
9	I.S.O (ISO Propil Alchord)	2 Bottles
10	Tweezer	12
11	Soft Brush	12
12	M.M. Card Reader Writer	8
13	Software Cables	2
14	Battery Charger	4
15	B.G.A. Kit(Ball Gride Aarey)	4
16	B.G.A. Paste	
17	Solder Wire	2 Bundles
18	White Flux	2
19	Jumper Wire	2
20	Files	4
21	Watch Maker Latue	1
22	Balance Spring Vibrating Tool	1
23	Over Vavling Machine	1
24	Watch Maker Screw Driver	4
25	Brass Twisser	12
26	Plastic Twsser	12
27	Movement Holder	4
28	Glass Remover	4
29	Glass Fixing Machine	4
30	Universal Opener	1
31	Quartz Watch Opener	4
32	Coil winding Maching	
33	Eye glass	6
34	Tablelamp	6
35	Cutler	4
36	Hammer	4
37	Hir spring Tweeser	4
38	Watell Repairing book	12
39	Circuit Book	4
40	Spare parts catalogue	1
41	Quartz water Tester	4