

કચ્છીય સિલેબસ

SYLLABUS FOR
CELLULAR (MOBILE) REPAIRING

UNDER
CRAFTSMAN TRAINING SCHEME
[G.C.V.T]

approved by
GOVERNMENT OF GUJARAT

Issued by
GOVERNMENT OF GUJARAT
G.C.V.T PATTERN
DIRECTORATE OF EMPLOYEMENT & TRAINNING
GANDHINAGAR

સમયગાળા :- ૨ માસ

મંજૂર તારીખ :- ૨૭-૧-૧૬

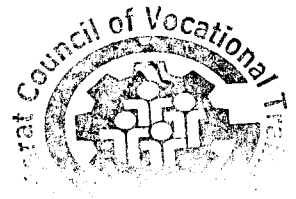
GENERAL INFORMATION

1. Name of The Trade : CELLULAR (MOBILE) REPAIRING

2. Duration of Craftsmen : 2 Months(240 hours)

Training

3. Entry Qualification : 8th STD Pass





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Gandhinagar**



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1. Name of Course:

Cellular (Mobile) Repairing

N.C.O. No. for Skills Covered:
(Please refer National Classification of
Occupations -2004 available
on www.dget.nic.in)

2. Engineering OR Non-engineering: Non -Engineering

3. No. of students per batch: 20

4. Duration in Hours. :240

5. Duration in Month: 2 @ 42 hours/Week.

6. Examination Scheme:

No.	Name of Subject	Teaching Hours during full course.	Maximum Marks. (Excluding Sessional)	Minimum Marks required for Passing (Excluding Sessional).	Sessional Marks if any.
Subject-1	Theory	48	50	20	-
Subject-2	Practical	192	150	90	-
Subject-3	-	-	-	-	-
Subject-4	-	-	-	-	-
Subject-5	-	-	-	-	-

7. Entry qualification for Trainee:

Minimum entry qualification (Essential):	Std. 8th pass
Desirable:	-

8. Minimum qualification for Trainer:

Minimum qualification (Essential):	10th pass + certificate course for mobile repairing+ 2yrs experience in mobile repairing
Desirable:	ITI/Diploma Electronics





Gujarat Council of Vocational Training Gandhinagar



9. Syllabus Committee Member:

Sr. No.	Name	Organization	Designation	Technical Qualification	Experience in Years	Signature
1.	Shri. C. N. Parekh	R.D.D AHM	Dy. Director	DME, DEE PDRA	35 years	
2.	Shri. A. B. Trivedi	ITI Gandhinagar	Principal Class-I	DEE, DCA, ICDA,	31 year	
3.	Shri. G. M. Trivedi	ITI Gandhinagar	Principal Class-II	MCA, BCA, PDCA, DCE	23 years	
4.	Shri. Ashwin P. Chhetriya	Wondel Mobile Ins. AHM	Principal Wondel edy.	Certificate course for Mobile rep. (CMES) BCOM	10 years	
5.	Shri. A. A. Malik	BSNL Gandhinagar sector: 41	S.D.O -Gandhinagar	DME	31 years	
6.	Shri. N. S. Patel	ITI Gandhinagar	SI Electronics	D. E. R. E	19 years	
7.	Shri. L. S. Menon	ITI Gandhinagar	SI Electronics	D. E. C. E	13 Years	

10. Terminal Skills of trainee: (Should be well defined and having reference to NCO):

The trainee, after successful completion of training, will have following skills...

1. Identify different Electronics Components & its Testing.
2. Knowledge of Micro Soldering & Desoldering.
3. Closing & Opening Mobile Instrument.
4. Fault finding & its remedies of different types of Mobile Instruments.
5. Operation of SMD reworks station.
6. Training of Mobile Software.
7. Introduction to Mobile Downloading.

(please attach separate sheet, if more space is required)





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11. Approximate cost of Tools
/ Equipments / Machinery for
Starting one batch of the course:

Rupees 266000

Reference Year

12. Area required for practical / Workshop for one batch.

32.5 Sq. Meter

13. Minimum Power connection required

1.5 K.W.

14.1 No of items in Standard list of Machinery:

List attached

14.1.1. Page NO from ___ to ___.

14.2 No of items in Standard list of Shop outfit:

List attached

14.2.1. Page NO from ___ to ___.

14.3 No of items in Standard list of Trainee Toll-Kit:

List attached

14.1.1. Page NO from ___ to ___.

***** FOR OFFICIAL USE *****

Approved by GCVT in Governing Body meeting on

29.1.15
next session

Syllabus implemented w.e.f. admission session

29.1.2015
next session

Revision History :

1. Revision No..... Revision Date.
2. Revision No..... Revision Date.
3. Revision No..... Revision Date.



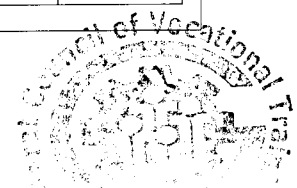


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Standard List of Machinery - Equipment / Shop-outfit / or Trainee Toolkit
For Trade of Cellular (Mobile) Repairing

Sr. No.	Description of Item with detailed specifications	Item type i.e. Machinery / Equipment OR Shop Outfit OR Trainee Toolkit	Quantity Required per one Batch of Students	Quantity Required per one Batch of Students for Instructor	Total Quantity Required (Total of previous two columns)	
1.	Magnifying glass with lamp	Tools	17	1	18	
2.	Soldering Iron 12v operated	Tools	17	1	18	
3.	Soldering hot air gun(Qu icl 8SOA)	Equipments	17	1	18	
4.	Cleaning Brush (Soft)	Tools	17	1	18	
5.	Mobile PCB Stand	Equipments	17	1	18	
6.	USB Power Supply 9v	Equipments	05	-	05	
7.	Computer P-4 with multimedia & Modem	Equipments	01	-	01	
8.	Different Basic Mobile Instrument	Equipments	10	-	10	
9.	Mobile Screw driver set	Tools	17	1	18	
10.	Tweezer set of 5 (10 cm)	Tools	17	1	18	
11.	Long nose plier (10 cm)	Tools	17	1	18	
12.	Combi nation Plier (12 cm) Insulated	Tools	17	1	18	
13.	Wire Stripper	Tools	17	1	18	
14.	BGA IC Tin Ball planting Kit	Equipments	17	1	18	
15.	Soldering Iron (35 w)	Tools	17	1	18	
16.	Digital Multimeter	Equipments	05	1	06	
17.	Analog Multimeter	Equipments	05	1	06	
18.	Downloading					
	1.	Data cable set (NOKIA,SONY,SAMSUNG,MOTOROLA)	Equipments	10	-	10
	2.	Bluetooth device	Equipments	01	-	01
	3.	Memory card reader	Equipments	01	-	01
19.	Furniture (For practical)					
	1	Table (4ft * 2ft)	Furniture	9	01	10
	2	Computer table	Furniture	01	-	01
	3	Revolving chair	Furniture	17	01	18
	4	White board (4ft*6ft)	Equipments	01	-	01
	5	Air conditioner(1.5 ton)	Equipments	02	-	02
	Furniture (For theory)					
	1	White board (4ft*6ft)	Equipments	01	-	01
	2	Chair with arm rest & writing pad	Furniture	17	-	17





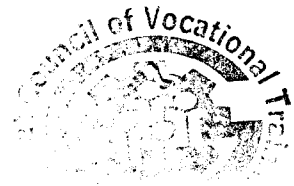
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कौशलम् बलम्

20.	Audio system	Equipments	01	-	01
21	Projector or LCD computer	Equipments	01	-	01
22	Mobile software		01		01
	1.UFS +HWK with cable set 2.SE tool with cable set		01	-	01

(As many sheets as required should be used to accommodate all items)





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Name of Syllabus:

Sector:

Terminal Competency :

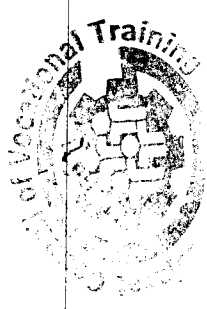
Theory	Practical

Signature:



Cellular Mobile Repairing Syllabus (2 Month/240hrs/8 weeks.)

વીક નં.	શીક્ષણ	પ્રેક્ટિકલ
૦૧	<ul style="list-style-type: none"> - બેઝીક ઇલેક્ટ્રીસિટી (volt, current, resistance, power) ઇલેક્ટ્રોનિક્સ પાર્ટ્સ - Register/Fusible Register, Capacitor, Coil, Transformer, Diode, Transistor, Fuse, ON/Off Switch, RX/TX Coupler, Inductor, Battery. 	<ul style="list-style-type: none"> - મલ્ટીમીટરની જુદા જુદા રેન્જનો ઉપયોગ કરવો. - મલ્ટીમીટર વડે વોલ્ટ,કરંટ, રજીસ્ટર માપવું. - મલ્ટીમીટર વડે ઇલેક્ટ્રોનિક્સ પાર્ટ્સ ચેક કરવા.
૦૨	<ul style="list-style-type: none"> - Mobile phone વિશેની માહિતી - માર્ગદર્શન. - Mobile વાપરવાની પદ્ધતિ. (Mobile Menu system,) - Mobile ની ટેકનોલોજી જેમ કે Infra red, Bluetooth, EDGE, GPRS, Synchronized service, 3G, CDMA, GSM, Multimedia card(Memory Card), Ring tones, Movie etc. 	<ul style="list-style-type: none"> - Micro Soldering અને Micro desoldering practice. - Jumper practice - SMD Parts ની ઓળખ કરવી.
૦૩	<ul style="list-style-type: none"> - મોબાઇલ ફોનનું બેઝીક રીપેરીંગ - વિવિધ ફોનના પાર્ટ્સ ની કામગીરીની જાણકારી જેવા કે. Mic, ringer, Speaker, LCD, Vibrator, light, Sim card, socket, battery connector, Display connector, Antenna, joy stick, Touchpad, Camera Socket, Bluetooth Module, Antenna Converter, Keypad Socket, All Display & Keypad Belt etc. 	<ul style="list-style-type: none"> - વિવિધ ફોન અને તેના પાર્ટ્સ ને સ્પેશિયલ ઇન્ટ્રુમેન્ટ દ્વારા ખોલવાની અને તેને પાછા બેસાડવાની વિવિધ રીત. - Battery charging ની System - Phone ની Parts નું Soldering તેમજ Desoldering practical.
૦૪	<ul style="list-style-type: none"> - મોબાઇલ ઇન્ટ્રુમેન્ટ નાં જુદા જુદા મોડ્યુલ્સની સંપૂર્ણ માહિતી, (મોબાઇલ ફોનનું ગુપ્ત રીપેરીંગ). - ફોનમા આવતાં ફોલ્ટ શોધવા. - સર્કિટનું ચેકીંગ અને સર્કિટ રીપેરીંગ. - PCB Layout Diagram દ્વારા Micro Component અને IC નો Circuit પર શોધવાની પદ્ધતિ. - All type of Chiplevel Parts જેવા કે, Intergrated Circuits (ICs), Moduloes, જેવા કે, Power Amplifier (PA), Radio Frequency (RF) Antenna Switch, Hager IC/R.F. Processor IC, Audio IC, Power IC, Flash IC, CPU IC, EEPROM IC, Ringer IC, RX/TX VCO, Simcard Driver IC, Memory card Reader IC, Display Driver IC, Keypad driver IC, Vibrator driver IC, F.M. IC, Light IC, Bluetooth IC, વિગેરે માહિતી. - મોબાઇલ ફોનમાં આવતા તમામ પ્રકારના ફોલ્ટ (શીક્ષણ તથા પ્રેક્ટીકલ) - જુદા જુદા પ્રકારના Network Fault, Display Fault, Simcard Fault, Audio Fault, Keypad Fault, Charging Fault, Camera Fault, Infrared/Bluetooth, Memory Card Fault, Local Mode/ Test Mode Fault, Head phone જેવા Fault રીપેર કરવાની રીત. - Totally Dead Phone માં PCB Layout Diagram દ્વારા Fault શોધવાની રીત (પ્રેક્ટીકલ સાથે) 	<ul style="list-style-type: none"> - સર્કિટમાં જુદા જુદા સ્ટેજ શોધવા. - સર્કિટ નું ચેકીંગ તેમજ રીપેરીંગ - જુદા જુદા Fault શોધવા અને રીપેર કરવા.

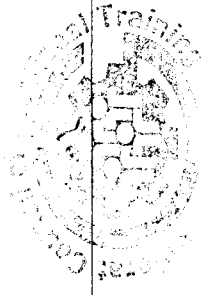


૦૫	<ul style="list-style-type: none"> - SMD વિશે માહિતી. - SMD Rework સ્ટેશનની માહિતી અને ઉપયોગો. 	<ul style="list-style-type: none"> - SMD Rework Station ની Soldering અને desoldering જુદી જુદી SMD IC બદલવી.
૦૬	<ul style="list-style-type: none"> - મોબાઇલ સોફ્ટવેર ની તાલીમ.(UFS/HWK/SE Tool/JAF) - મોબાઇલ ફોનની લોક અનલોક માહિતી. - મોબાઇલ ફોનમાં ફ્લેશીંગ વીશેની માહિતી. - મોબાઇલ ફોનને ફોરમેટ કરવાની માહિતી. - મોબાઇલ ફોનના બેકઅપ અંગેની માહિતી. - મોબાઇલ ફોનમાં સોફ્ટવેર થી આવતા ફોલ્ડ, જેવા કે Contact Service, Security Code, Contact Service, Contact Retailer, Restart Phone, Hang, Virus Problem, Phone Restricted, White light, વગેરે દૂર કરવાની રીતો. 	<ul style="list-style-type: none"> - લોક અનલોક. - ફ્લેશીંગ. - ફોર્મેટીંગ. - સોફ્ટવેર થી આવતા વિવિધ ફોલ્ડ નું સોલ્યુશન.
૦૭	<p><u>Mobile Downloading ની માહિતી.</u></p> <ul style="list-style-type: none"> - મોબાઇલમાં Downloading કરવા માટેની જ્ઞાનસભા માહિતી. - Data Cable, Memory Card reader, Bluetooth, Infrared દ્વારા Download કરવાની પદ્ધતિ. - Ring Tones, Movie, Image, MP3 Songs, Infrared, Bluetooth, Memory Card, Data Cable, વગેરે ડાઉનલોડીંગ થી થઈ શકે છે. 	<ul style="list-style-type: none"> - Data cable, Card Reader, Bluetooth, Infrared, દ્વારા ડાઉનલોડીંગ ડેકોડીકવ. (Ringtone, Movie, Image, Game downloading)
૦૮	<p><u>મોબાઇલ ફોનનું માર્કેટીંગ</u></p> <ul style="list-style-type: none"> - વ્યાપારીક ધોરણે ધંધો ચાલુ કરવા માટે જરૂરી માહિતી. - વિવિધ પાર્ટ્સ જેવા કે બેટરી ચાર્જર, કવર, અને અન્ય જરૂરી એસેસરીઝ મેળવવાનું જ્ઞાન. - વિવિધ Provider કંપનીનાં સીમકાર્ડ, રીચાર્જકુપન અને તેમનાં દ્વારા અપાતી સેવાઓ અંગેની માહિતી. - તમામ કંપનીના ફોન નવાં તથા જુનાં ખરીદવા અને વેચવાં માટેની જરૂરી માહિતી અને તેમના નામ તથા સરનામો. 	



List of Tools / Equipments / Machinery / Furniture for the trade of Mobile phone Repairing.

<u>Sr. No.</u>	Name of the tools & equipment as per the syllabus	No. of Qty.	Remarks
1.	Magnifying glass with lamp	17	
2.	Soldering Iron 12 V operated	17	
3.	Soldering hot air gun (quick 850 A)	17	
4.	Cleaning Brush (soft)	17	
5.	Mobile PCB stand	17	
6.	PCB Cleaner Bottle	17	
7.	Soldering wire & White past	17	
8.	Micro Jumper wire	17	
9.	Mobile Screw driver set	17	
10.	Tweezers Set (10 cm) set of 5	17	
11.	Long nose player (10 cm)	17	
12.	Combination player (12 cm) insulated	17	
13.	Wire stripper	17	
14.	BGA IC Tin Ball planting kit	17	
15.	PPD Solder past	17	
16.	Equipment Soldering iron (35 W)	17	
17.	Digital Multi meter	5	
18.	Analog Multi meter	5	
19.	USB Power supply (9 V)	5	
20.	Computer P4 with multi media & modem	1	



21.	Different Basic Mobile instrument Nokia, 4 Sony ericsson, 3 Samsung, 1 Motorola, 1 CDMA, 1	10	
22.	Different Mobile Diagram Books	10	
	Downloading		
23.	1. Data cable (Nokia, Sony, Samsung, Motorola) 2. Bluetooth Device 3. Memory Card reader	10 1 1	
	Software		
24.	1. UFS + HWK with Cable Set 2. SE Tool with Cable Set	1 1	
25.	Furniture & Infrastructure (Practical Room)		
	1 Area in sq mtr (Practical)	22.5 sq. mtr.	
	2 Table (4ft X 2ft)	9 Nos	
	3 Computer Table	1 Nos	
	4 Revolving Chair	17 Nos	
	5 White Board (4ft X 6ft)	1 Nos	
	6 Air conditioner (1.5 ton)	2 Nos	
	Theory Room		
	7 Area in sq mtr	10 Sq.mtr.	
	8 White Board (4ft X 6ft)	1 Nos	
	9 Chair with arm rest and writing pad	17 Nos	
	10 Audio system	1 Nos	
	11 Projector or LCD Computer	1 Nos	



26.	Raw Material List		
	1 Mic		10
	2 Speaker		10
	3 Different Charger		10
	4 Different LCD's		10
	5 Different LED		50
	6 ON/OFF Switch		10
	7 Battery Connector		10
	8 Charging Connector		10
	9 Head phone Connector		10
	10 Display Socket		10
	11 Key pad Socket		10
	12 Different Display Belt		10
	13 Different Battery		10
	14 Different Ringer		10
	15 Different Sim reader		10
	16 Different Memory Card Socket		10
	17 Different Camera		5
	18 Network IC (Antenna Switch/ PF/RF Processor)		9
	19 Different Power IC		
	20 all Driver IC (Ringer, Light, Vibrator, Sim card, Keypad, Display, Memory card, Audio)		10
	21 Different Body		80(Each 10)
	22 Different Antenna		10
	23 Different Flash IC		5

