GOVERNMENT OF TAMILNADU

DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI-25

STATE PROJECT COORDINATION UNIT

(Established under Canada India Institutional Cooperation Project)

CURRICULUM

Course Name	**MOBILE PHONE SERVICING**
Course Code	**EC/2020/008**
Course Duration	60 Hours
Minimum Eligibility Criteria	10th/+2 /ITI/Diploma/Graduate
Pre-requisites (if any)	Knowledge of Basic Electronics
Course Objectives	Training module has been designed for the participants to • Understandthe components of Mobile Phones • Testvarious components in Mobile Phone • Perform Identification of Hardware and software problems in mobile phone • Practice in Replacing of Faulted components in Mobile
Course Outcomes	At the end of training, the trainees will be able to • Explain the concept of Mobile phone Technology • Perform flashing of various brand Mobile Phone • Replace the faulted components in Mobile Phone. • Rectify the Hardware and Software Problems in Mobile Phone.
Expected Job Roles	Mobile Phone Service Technician

TEACHING AND SCHEME OF EXAMINATION

Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
EC/2020/008	MOBILE PHONE SERVICING	Theory	24	10	20	3 Hours
		Practical	36	40	80	
		Total	60	50	100	

EC/2020/008- MOBILE PHONE SERVICING
DETAILED SYLLABUS

Unit No	Modules	No.of.Hours	
		Theory	Practical
I	**Introduction to Mobile Phone Servicing**	**10 Hours**	
1.1	Basics of Mobile electronics and Mobile communication, Mobile generations	07	03
1.2	How basically cell phone works		
1.3	Study of various tools and equipment used in mobile phone repair		
1.4	Study of parts inside mobile phone, Study of mobile accessories		
II	**Hardware Repair**	**25 Hours**	
2.1	Study of PCB (Motherboard) – Assembling and Disassembling of mobile phone	07	18
2.2	**Practical:** Testing of various parts and components with multimeter		
2.3	Study of different IC chips used in motherboard		
2.4	**Practical:** Touch/Display replacement		
2.5	**Practical:** Soldering and desoldering of components (using Soldering iron and Blower)		
2.6	Reheating and bonding of various PGA and SMD chips		
2.7	Water damage repair techniques - cleaning procedure		
III	**Software repair**	**25 Hours**	
3.1	Introduction of various flashing methods and software, Study of faults arising due to corrupt software	10	15
3.2	Flashing of various brands of handset		
3.3	Removing virus from infected phone, Unlocking of handset through codes and software		
3.4	Fault finding and common repair procedure for software related faults		
3.5	**Practical:** Formatting of handsets, Circuit tracing and Jumpering techniques		
3.6	Advanced trouble shooting techniques		
	Total theory / Practical Hours	**24**	**36**
	Total hours		**60**

HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1	LAPTOP
2	Mobile Phones
3	Soldering iron
4	Blower
5	Micro screw driver

SOFTWARE REQUIREMENT

S.NO	LIST OF SOFTWARE
1	Corresponding Company/Model Software

REFERENCE BOOKS

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1	Android and Windows Mobile Phone Repairing	SanjibPandit	Bpb Publications, 2015
2	Fundamentals of Mobile Computing	Prasant Kumar Pattnaik, Rajib Mall	PHI Learning Pvt. Ltd..
3	Mobile Phones and Tablets Repairs	ChukkyOparandu	Springer Science & Business Media.
4	Troubleshooting of Electronic Devices	Nipun Sharma	Firewall Media
5	Advance Mobile Repairing Work Android Smartphone Repairing – Practice e-book	Araving Singh	MobiTechCareer.com Hitech Mobile Technology

ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the CIICP Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the CIICP Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The passing criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training, certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnics.

END EXAMINATION

ALLOCATION OF MARKS

S.NO	Description	Max. Marks
1.	Theory Examination	20
2.	Practical Examination	
	a)Objective and Circuit Diagram	20
	b)Procedure and Connections / Execution	20
	c)Result and Viva	20
	d)Record	20
	Total Marks	**100**

THEORY MODEL QUESTION PAPER

EC/2020/008 – MOBILE PHONE SERVICING

(Maximum Marks: 20)

(N.B: Answer any Twenty questions) 20x1= 20 Marks

1. What is a mobile electronic?
2. What are the different types of mobile devices?
3. Define Mobile communication.
4. How a call is made in mobile communication?
5. List out the types of mobile generations.
6. What is 4G?
7. What type of waves used in cell phone?
8. What are the various tools used for mobile phone repairing?
9. Give the equipments used for mobile phone repairing.
10. Expand PCB.
11. How you will assemble a mobile phone?
12. What are the tricks used to disassemble a mobile phone?
13. Define IC.
14. What are the different IC chips used in Motherboard?
15. What is SMD package?
16. What is the full form of PGA in SMD IC package?
17. What are the methods to fix a water damaged phone?
18. Why phone is not turning on after water damage?
19. What is flashing process in mobile?
20. What are the types of various flashing methods?
21. What is cyber flashing?
22. How you will remove a virus from infected phone?
23. What is the procedure to unlock of Handset through codes?
24. List the common repair procedure for software related faults.
25. Explain the Advanced trouble shooting techniques.