

CHAPTER FIVE

5.1 CONCLUSION

The design and construction of an extension socket with an uninterruptible power supply has been achieved. The design successfully made use of electrical components available in our local market to carry out the designed. In addition, it is worth mentioning that the project will perfectly satisfy what it was constructed for; charging of multiple devices at the same time.

5.2 RECOMMENDATION

The implementation, construction and deployment of this project work have successfully achieved the aim and objectives initially set out through extensive tests and troubleshooting. The project work is solely based on acquiring the integrated circuit present in the acquired circuit. The IC's can be ordered from outside the country in earnest, considering the fact that project work is within some gazette period for completion.

Also, encouragement should be given to engineering students to do more of this project work in the nearest future as it is well marketable in any sphere.

REFERENCES

- [1] C.L. Strong Simon and Schuster, "The Scientific American Book of Projects for the Amateur Scientist" 1960. Pages 377-398
- [2] Alistair E. Richie, Seth H. Washburn D. Van Nostrand, "The Design of Switching Circuits William Keister" 1951.
- [3] Hao wang (1957), A variant to turing 's Theory of computing machine, JACM (Journal of the Association for computing machinery) 4, (June 23-25) 1954, pp 63
- [4] Marvin Minsky , " Recursive Unsolvability of post's problem 'Tag' and other Topics in theory of Turing machine"1960 pp. 437-455
- [5] Calvin elgot and Abraham Robinson (1964) "Random Access stored program machines, an approach to programming languages, Vol. 11, No 4, (October, 1964) pp. 365-399
- [6] Bishop, C. M. "Pattern recognition and machine learning"Royal Statistical Soc. Series B (Methodological) 48(3):259-302., 2006. 1st edition, Springer New York, 738 pages.
- [7] Cheriadat, A., Bright, E., Potere, D., Bhaduri, B., 2007., "Mapping of settlements in high resolution satellite imagery using high performance computing" . GeoJournal 69(1/2):119-129.

APPENDIX

BILL OF ENGINEERING MEASUREMENT AND EVALUATION (BEME)

| S/N | LIST OF ITEM | DESCRIPTION | QTY | PRICE | AMOUNT |
|-----|-----------------------|-----------------------|-----|-------|---------|
| 1. | LITHIUM BATTERY | 12V/3AH | 1 | 4000 | 4000.00 |
| 2. | LED | 5AH | 2 | 400 | 800.00 |
| 3. | SOCKETS | 13A | 6 | 500 | 3000 |
| 4. | TRANSFORMER | 12V | 1 | 3000 | 3000 |
| 5. | POWER CABLE | 2.5MM ² | 1 | 1000 | 1000 |
| 6. | USB | PORTS | 2 | 1500 | 3000 |
| 4 | SWITCHES | LED | 6 | 150 | 900 |
| 3. | RESISTOR | 4.7K | 3 | 5 | 15.00 |
| 4. | RESISTOR | 100K | 1 | 5 | 5.00 |
| 5. | CAPACITOR | 0.1 μ F | 3 | 30 | 90.00 |
| 6. | CAPACITOR | 1000 μ F | 2 | 30 | 60.00 |
| 7. | SEVEN SEGMENT DECODER | CD4033 AND CD 4027 | 4 | 300 | 1200 |
| 8. | FUSE | 3A | 1 | 200 | 200 |
| 8. | MICRO-CONTROLLER | ATMEGA328 | 1 | 3000 | 3000 |
| 9. | ULTRASONIC SENSOR | HC-SRO4 | 1 | 2000 | 2000 |
| 10. | CONNECTOR | 8 PINS | 2 | 300 | 600 |
| 11. | CONNECTOR SOCKET | 8 PINS | 4 | 50 | 200 |
| 12. | PLASTIC CASING | | | 1 | 3000 |
| 13. | CRYSTAL OSCILLATOR | 4 PIN | 2 | 100 | 200 |
| 14. | BOLTS AND NUTS | | 6 | 40 | 240 |

| | | | | | |
|-----|-----------------------------------|--|---|--------------|--------|
| | | | | | |
| 15. | PRINTED CIRCUIT BOARD + DESIGN | | 1 | 3500 | 3500 |
| 16. | COVER OF PCB | | 1 | 200 | 200 |
| 17. | DRILLING BIT | | 1 | 150 | 150 |
| 18. | SOLDERING IRON | | 1 | 350 | 350 |
| 19. | MISCELLANEOUS | | | 3000 | 3000 |
| 20 | Soldering led | | 1 | 300 | 300 |
| 21 | | | | TOTAL | 34,010 |