



University College Sedaya International



SCHOOL OF ENGINEERING

DESIGN OF A SWITCHED-MODE AC POWER SUPPLY

FINAL REPORT

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ABSTRACT

This report focuses about the project entitled “Design of a Switched-Mode AC Power Supply”. This Switched Mode is also called as “Uninterrupted Power Supply (UPS) System”. A UPS is the interface between the electricity mains supply and a piece of sensitive equipment. The UPS will provide a trouble-free electricity supply, or sufficient electrical autonomy to either shut systems down or switch to other alternative supplies. The electricity utility companies supply alternating current at 230VAC, 50Hz. It will be implemented as a back-up system whenever the main power supplies failure or blackout. The back-up system uses a lead-acid battery to produce the back-up power supply for at least 2 to 3 hours. This UPS system consists of step up/down transformer, rectifier, battery charging and back-up and inverter. In this project report, a brief explanation given for all the elements of UPS as well as the types of UPS system.