

272-Q22

BCTHS MECHATRONICS TECHNOLOGY

NAME: _____ START DATE: ____/____/____
COMPLETION DATE: ____/____/____

TASK: Q-22 Construct and Analyze an AC/DC power supply

PERFORMANCE OBJECTIVE: Given a broken power supply the student will troubleshoot and repair in 30 minutes or less.

ENABLING OBJECTIVE: Complete Q 20

TOOLS REQUIRED: Basic hand tools, meter, power supply kit.

SAFETY FACTORS: Complete Q01-Q02 and observe all school/classroom safety rules at all times

ACADEMIC ANCHORS:

M11.A.1.1.2 Express numbers using scientific notation

M11.A.2.1.1 Solve problems operations with rational numbers using rates and percentages

M11.A.2.1.2 Solve problems using direct and inverse proportions

R11.A.1.3.5 Demonstrate after reading understanding of non-fiction text

R11.A.2.1.2 Identify meaning of content specific words used in text

CAREER & WORK ANCHORS:

13.2.11.E Demonstrate essential workplace skills.

PERFORMANCE CHECKLIST:

STUDENT CHECK	TASK TO BE COMPLETED	TEACHER SIGN OFF
	1. Identify academic anchors and complete learning guide AA01	_____
	2. View power supply video and read information sheet	_____
	3. Construct Power Supply as per manufacturer's instructions	_____
	4. Troubleshoot and repair DC power supply.	_____
	5. Have Instructor check your work.	_____

PERFORMANCE LEVEL:

MASTERY SATISFACTORY FAMILIARIZATION INSTRUCTED/CANNOT PERFORM

BUCKS COUNTY TECHNICAL SCHOOL – May 4, 2021

INSTRUCTOR'S SIGNATURE

INFORMATION/SAFETY

When constructing your power supply or working on any electrical power supply **ALWAYS** follow electrical safety guidelines. Make sure all capacitors are discharged when handling the device. Be cautious when making measurements on a live supply. Always work with a co-worker. Power supplies are a source of voltage and current and are a potential shock hazard.

PERFORMANCE

Following the manufacturers instructions construct your AC/DC power supply kit. After complete have instructor check your work. After the power supply is complete the instructor will place a fault in the circuit . Troubleshoot the fault, repair the supply, and document your work.

GRADING RUBRIC

	Instructed/Cannot 0 points	Familiarization 1 point	Satisfactory 2 points	Mastery 3 points
Safety	Student rarely follows industry standard safety rules	Student needs to be frequently reminded to follow industry standard safety rules	Follows all industry standard safety rules, but required one reminder.	Student always follows all industry standard safety rules
Task	Student is unable to complete task	Student requires frequent assistance to complete task, and/or is familiar with some parts of the task	Student requires very little assistance to complete task, or has only completed task once or twice, but completed it satisfactorily with little to no assistance	Student can perform task with no assistance and has completed the task many times with no errors.

Mastery = 6 points

Satisfactory = 4-5 points

Familiarization = 2-3 points

Instructed cannot perform = <2 points

