



2002 State Competition
FFA Agricultural Mechanics Contest
University of Missouri
50 points

Contestant # _____
Contestant Name _____
Chapter _____

Electrical Motors

Motor Identification (3 points each)

1. Which motor tagged is the permanent split capacitor motor? _____
2. Which motor tagged is the split- phase motor? _____

Use the nameplate provided to answer questions 3-7. (2 points each)

3. With the service factor of motor #3, what is the maximum amps we could operate this motor at?
Answer _____
4. If we ran motor #4 at 25 RPM below rated, are we _____.
 - A. Overworking the motor
 - B. Under working the motor
 - C. Running the engine at the right speed
5. What power phase does motor #5 run on? _____
 - A. Single phase
 - B. 3 phase
6. What voltage is motor #6 wired for?
 - A. 115
 - B. 120
 - C. 125
 - D. 240
7. What is the temperature rise (duty cycle) of motor #7? _____
 - A. 50⁰C
 - B. 50⁰F
 - C. 60⁰F
 - D. 60⁰C
 - E. None of the above.

Use the electrical units to answer questions 8-10. (3 points each)

8. The device tagged at station #8 is a normally _____ switch.
A. Open
B. Closed
9. Which terminal on the time switch located at station #9, does line "N" run to
A. 1
B. 2
C. 3
D. 4
10. The time switch at station #10 will turn on two times during the day. Which two times will it turn on?

11. The thermostat located at station #11 is wired to function for _____?
A. Cooling only
B. Heating only
C. Cooling and Heating
D. None of the above
12. Which terminal in conjunction with the common terminal would make the thermostat a cooling thermostat (closes on rise)? Use the thermostat located at station #11.
A. 1
B. 2
C. 3

Put the letter next to the part that corresponds to it on the table. (2 points each)

13. _____ Capacitor
14. _____ Wound rotor
15. _____ Squirrel cage rotor
16. _____ Centrifugal switch
17. _____ End bell
18. _____ Stator frame
19. _____ Capacitor cover
20. _____ Retaining ring

Scorecard for Electrical Motors Competition

Criteria	<u>Points Possible</u>	<u>Points Earned</u>
1. Motor identification	6 points	_____
2. Nameplate identification	10 points	_____
3. Electrical units	15 points	_____
4. Part identification	16 points	_____
5. Safety	<u>3 points</u>	_____
Total	50 points	<input type="text"/>