

FACULTY OF MANUFACTURING & MECHATRONICS ENGINEERING TECHNOLOGY UNIVERSITI MALAYSIA PAHANG 26600 PEKAN, PAHANG DARUL MAKMUR

CONCEIVE (C) RUBRIC		
MOD. 2	LAB PRACTICAL	

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Day	Time	Venue

Lecturer :	Dr Mohd Azri Hizami Bin Rasid, Mr. Suhaimi Bin Puteh		
Course Code & Name :	BTI3503 - Electrical Machines		
Program :	Module TVET	Section:	1
Faculty:	FTKPM		
Semester:	I	Session:	25/26

Total Mark	<u> </u>
	·
	1
	2
Students Name	3
	4
	5

Instructor Comments and Feedback Strengths Demonstrated:

Areas for Development:

Specific Suggestions for Future Labs:

1.1 Theoretical Knowledge		
Criteria	Score (0-4)	Comments
Understanding of induction motor principles		
 Demonstrates knowledge of motor operation 		
Explains slip concept clearly		
Understands power factor significance		
Familiarity with test procedures		
 Reviews lab manual beforehand 		
 Understands measurement techniques 		
Knows expected outcomes		
Safety awareness		
Demonstrates knowledge of safety procedures		
 Identifies potential hazards 		
Knows emergency procedures		
tota	al (0 /12

Additional Pre-Lab Observations:

[] Brings required :	materials (calcu	lator, notebook, etc.)
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[] Arrives on time and ready to begin

[] Asks relevant questions about procedures

2.1 Personal Safety		
Criteria	Score (0-4)	Comments
Personal Protective Equipment (PPE)		
Wears safety glasses throughout lab		
Appropriate footwear (closed-toe)		
No loose clothing/jewelry near equipment		
Electrical safety practices		
Makes connections only when power is off		
Uses proper isolation procedures		
Checks connections before energizing		
Mechanical safety awareness		
Maintains safe distance from rotating		
equipment		
Keeps workspace clean and organized		
Reports unusual equipment behavior		

Score (0-4)	Comments

total 0 /20

3.1 Equipment Setup and Connections		
Criteria	Score (0-4)	Comments
Wiring and connections		
Makes correct motor connections (wye		
configuration)		
Properly connects measurement instruments		
Verifies connections before energizing		
Instrument calibration and setup		
Properly configures measurement ranges		
Checks instrument functionality		
Sets up data acquisition correctly		
System verification		
Performs pre-start checks systematically		
Verifies phase sequence		
Ensures proper load coupling		

3.2 Data Collection Techniques		
Criteria	Score (0-4)	Comments
Virtual simulation execution • Navigates virtual lab environment effectively • Collects data at specified voltage points • Allows adequate settling time		
Physical measurement accuracy Takes readings when system is stable Uses appropriate measurement techniques Records data consistently and accurately		
Load variation procedure Applies load increments systematically Monitors motor condition during testing Recognizes approach to stall condition		

3.3 Real-time Analysis and Troubleshooting		
Criteria	Score (0-4)	Comments

Data validation	
Recognizes unreasonable readings	
Identifies measurement errors promptly	
Takes corrective action when needed	
Equipment operation	
Operates variacs smoothly and safely	
Monitors system parameters continuously	
Responds appropriately to equipment	
behavior	
Problem-solving skills	
Diagnoses issues systematically	
Seeks appropriate assistance when needed	
Implements solutions effectively	

total

0 /36

*Based on Report

4.1 Data Interpretation				
Criteria	Score (0-4)	Comments		
Trend identification				
 Recognizes patterns in data 				
• Identifies relationships between variables				
 Compares results with theoretical 				
expectations				
Critical analysis				
 Evaluates data quality and consistency 				
 Identifies sources of error 				
• Distinguishes between measurement and				
calculation errors				
Graphical representation				
 Creates appropriate graphs during lab 				
 Interprets graphical trends correctly 				
 Uses graphs to support conclusions 				

total /12

*Based on Report

5.1 Verbal Communication			
Criteria	Score (0-4)	Comments	
Technical discussion			
• Explains observations using technical			
terminology			
Discusses results with instructor			
coherently			
Answers questions accurately			
 Question formulation Asks relevant, thoughtful questions Seeks clarification when needed Demonstrates curiosity about results 			

total /8