



UTM
UNIVERSITI

TEKNOLOGI MALAYSIA

Sekolah Pendidikan
Profesional dan
Pendidikan Berterusan
(SPACE)

**JABATAN KEJURUTERAAN ELEKTRIK
PUSAT PENGAJIAN DIPLOMA (PPD), SPACE
UNIVERSITI TEKNOLOGI MALAYSIA
KUALA LUMPUR**

DIGITAL ELECTRONICS LABORATORY

REPORT SHEET EXPERIMENT 2

Group members	1.
	2.
	3.
	4.
	5.
Lecturer	:
Date	:

No.	PO	CO	Student Marks	Marks
1	PLO1	CLO3		50%
2	PLO2	CLO3		30%
3	PLO4	CLO3		10%
4	PLO8	CLO5		10%
Total Marks				/ 100%

EXPERIMENT 2 : BCD TO DECIMAL DECODER (IC 7442) AND DETERMINATION THE CONFIGURATION 7-SEGMENT DISPLAY

RESULT

Part 1 : BCD-to-Decimal Decoder (IC 7442)

D	C	B	A	LED 0	LED 1	LED 2	LED 3	LED 4	LED 5	LED 5	LED 7	LED 8	LED 9
0	0	0	0										
0	0	0	1										
0	0	1	0										
0	0	1	1										
0	1	0	0										
0	1	0	1										
0	1	1	0										
0	1	1	1										
1	0	0	0										
1	0	0	1										

Table 1.1

PLO1	CLO3	/10m
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Part 2 : Determination the configuration of 7-Segment display

4. Complete Figure 2.2 (b). Fill the colors on segment c if you find there is light on it. Note that this is the result of your experiment. (No need to fill if you find no light on segment c)

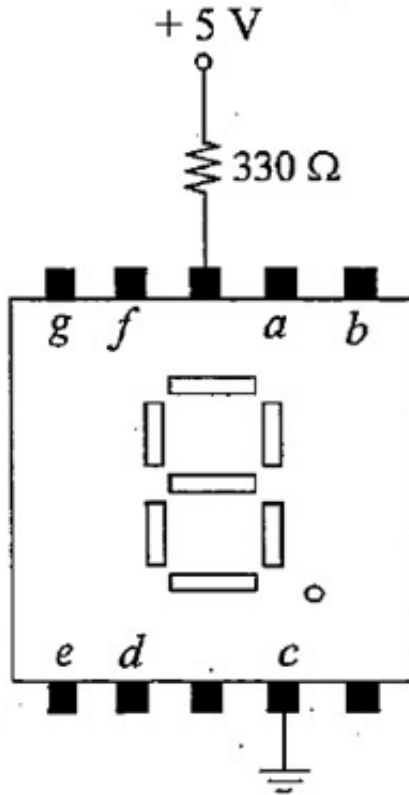


Figure 2.2(b)

PLO1	CLO3	/3m
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Observation

Q1. What is the configuration of this display?

(Your answer must be related with your finding).

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PLO1	CLO3	/5m
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Q2. Give your brief conclusion based on the result of Part B : Experiment 2.2 (4).

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PLO1	CLO3	/8m
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Part 3.1 : BCD-to-7-Segment Decoder (IC 7447)











D	C	B	A	7-segment display
0	0	0	0	
0	0	0	1	
0	0	1	0	
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	
0	1	1	1	
1	0	0	0	
1	0	0	1	

Table 3.1

PLO1	CLO3	/10m
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Give your brief conclusion based on the result of Table 3.1

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PLO1	CLO3	/8m
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3.2 : BCD-to-7-Segment Decoder (IC 7448)

D	C	B	A	7-segment display
0	0	0	0	
0	0	0	1	
0	0	1	0	
0	0	1	1	
0	1	0	0	
0	1	0	1	
0	1	1	0	
0	1	1	1	
1	0	0	0	
1	0	0	1	

Table 3.2

PLO1	CLO3	/10m
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Give your brief conclusion based on the result of Table 3.2

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PLO1	CLO3	/8m
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Part C : Multidigit Displays

















SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 7	SW 8	Display 1	Display 2
0	0	0	0	0	0	0	1		
0	0	0	1	0	0	1	0		
0	0	1	0	0	0	1	1		
0	0	1	1	0	1	0	0		
0	1	0	0	0	1	0	1		
0	1	0	1	0	1	1	0		
0	1	1	0	0	1	1	1		
0	1	1	1	1	0	0	0		

Table 3.3

PLO1	CLO3	/8m
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Give your brief conclusion based on the result of Table 3.3

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PLO1	CLO3	/10m
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Give your conclusion and observation from Experiment 2

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PLO1	CLO3	/20m
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PLO2 (Psychomotor/Hands On Skills) for LABS Experiments

	Criteria	Very poor (5 Marks)	Poor (10 Marks)	Moderate (15 Marks)	Good (20 Marks)	Excellent (25 Marks)
1	Ability to perform lab works based on the manual/ guidelines provided	Not at all	Quite Limited /Selectively	Can perform lab work moderately but require a lot of guidance	Can perform lab work systematically and only need minor guidance	Demonstrate systematic and excellent performances
2	Ability to perform simple lab work without supervision	Need full supervision	Major supervision	Minor supervision	Limited supervision	Work independently With no supervision
3	Ability to carry out lab work efficiently on the following criteria, (circuit assembly, using measurement apparatus and techniques)	Not able to construct a full circuit, poor/inaccurate measurement techniques/usage of equipment	Completed full circuit but poor/inaccurate measurement techniques/usage of equipment	Completed full circuit and it works successfully. However the measurement techniques/usage of equipment had some minor deficiency	Completed full circuit and it works successfully. However the measurement techniques/usage of equipment had produced a few errors/corrections.	Circuit was completed and works properly without any errors /corrections. Also demonstrated an excellent skills/conducts.
4	Ability to collect the required data, performs appropriate analysis and/or troubleshooting (if necessary).	Not able to collect data and/or perform analysis	Limited data collection but not able to perform analysis/ troubleshooting	Demonstrates major errors in data collection and /or analysis. Limited ability in troubleshooting	Minor error in data collection and analysis. Good approach/techniques in troubleshooting.	Data collection and data analysis are done systematically and performs excellent approaches to trouble shoot (if necessary)

PLO4 For Laboratory Report

	Criteria	Very Poor (5 Marks)	Poor (10 Marks)	Moderate (15 Marks)	Good (20 Marks)	Excellent (25 Marks)
1	Data Collection	No data reported.	Data is brief and missing significant pieces of information.	Incomplete these of components of data (Both tables and Graphes): <ul style="list-style-type: none"> • _____ Tables • _____ Graphs 	Only one component of data is incomplete (either table or graph). <ul style="list-style-type: none"> • Tables/Graphs 	Data is completed properly and attributes mentioned below are observed with great care: <ul style="list-style-type: none"> • Tables are easy to read and units are provided. • Graphs are labeled and shown trends.
2	Completing/Answering Questions	Questions are not answered at all.	Attempts were made but gave wrong answer to every question.	Questions are answered without any depth and with many errors.	Questions are properly answered but with a few errors.	Questions are answered completely and correctly.
3	Summary/Conclusion	No conclusion or summary is/are drawn/reported	Conclusion is too brief without any reference to important pieces of information	Any two components of the conclusion/summary (mentioned) are missing : <ul style="list-style-type: none"> • Summary • Data • Hypothesis • Errors 	Any component of the conclusion /Summary (mentioned) is missing: <ul style="list-style-type: none"> • Summary • Data • Hypothesis • Errors 	Conclusion /Summary of these attributes below were addressed/reported properly, clearly and systematically. <ul style="list-style-type: none"> • experiment, • data cited • hypothesis/assumptions made • The source of errors.
4	Report Quality	No attention to detail evident.	Report contains many errors.	Report is good but with few spelling or grammatical errors.	Report is well written and cohesive, with a few errors	Report is very well written without any spelling or grammatical mistakes.

PLO8 for LABS Experiments

	Criteria -Understand the conducts, ethical values and socio- cultural impacts on professional norm and practice	Very poor (5 Marks)	Poor (10 Marks)	Moderate (15 Marks)	Good (20 Marks)	Excellent (25 Marks)
1	Professional Practice (Punctuality/Follow the Rules)	Non-Conforming/In- punctuality	Not always Conforming/ Not always punctual	Sometimes Conforming/Sometime s punctual	Conforming /Punctual	Always Conforming /Always Punctual
2	Ethical Conduct/Behaviour (Trustworthy / Respectfulness)	Does not practice	Not always practicing	Sometimes only	Mostly practicing	Always practicing
3	Social Cultural (Racial Harmony)	Does not observe	Not always observe	Sometimes observe	Mostly observe	Always observe
4	Personality	Mostly unpleasant	Not always pleasant	Moderately pleasant	Mostly pleasant	Always pleasant