



Portfolio Assessment tool

Qualification national code and title	UEE30811 - Certificate III in Electrotechnology: Electrician
Unit/s national code/s and title/s	UEENEEG033A – Solve problems in single and three phase low voltage electrical apparatus and circuits - Lighting

Portfolio Assessment			
Solve problems in single and three phase low voltage electrical apparatus and circuits G033A Lighting			
Lecturer Name			
Student Name			
Student ID Number			
Telephone Contact Number		Email:	
By completing and submitting this signed form to my lecturer, I am stating that:			
<ul style="list-style-type: none"> a. The attached submission is completely my own work b. I understand a copy of my assessment will be kept by the NMTAFE for their records c. I understand my assessment may be selected for use in the NMTAFE's validation and audit process to ensure student assessment meets requirements 			
Student Signature		Date	
Due Date		Time	

Assessment Result Satisfactory / Not Yet Satisfactory (please circle) **Date:** _____

In order to satisfy requirements for this assessment, you need to complete the following:

<p>Feedback to student:</p> <p><u>Assessor please note:</u> Where verbal clarification has been sought from a student to gather additional assessment evidence from an assessment item, question/s and response/s must be recorded, signed, and dated by the assessor, against the relevant assessment item/s.</p>
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Student Feedback

<p><i>Feedback from student:</i></p>

Lecturer Signature: _____ **Student Signature:** _____



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Assessment type (☑):

- Questioning (Oral/Written)
- Practical Demonstration
- 3rd Party Report
- Other – Project/Portfolio (*please specify*)

Assessment Resources:

Students will need access to:

Writing Instruments
AS 2298.1:2005
AS/NZS 3000:2018

Assessment Instructions:

Assessor instructions

1. Student to answer all portfolio question by due date.
2. The assessor is to sign and record the students result as **satisfactory** or **not yet satisfactory** at the end of the assessment.

Student instructions

1. *Complete all portfolio questions by the due date given to you by your lecturer.*
2. *Failure to submit by due date will result in a re-enrol for this unit.*



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1.

a) Define 'LUMINOUS FLUX' and state the unit of measurement.

b) Define 'LUMINOUS INTENSITY' and state the unit of measurement.

c) Define 'LUMINANCE' and state the unit of measurement.

d) Define 'EFFICACY' and state the unit of measurement.

2. Explain what an "incandescent" lamp is and how it radiates light.

3. Name four methods of reducing the stroboscopic effect?

4. What are the 7 primary colours in the spectrum of daylight?



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5. If the Illuminance on a surface 4m from a light source is 40 Lux what would the illuminance be if the light source was moved 2m further away?

6. Explain how a standard Fluorescent luminaire works. (*hint :remember ballast, starter & capacitor*)

7. Draw the circuit diagram for a SINGLE fluorescent luminaire.

8. What are the names given to the invisible light that exist on either end of the visible electromagnetic spectrum and give a use for each?



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9. What are the advantages and disadvantages (if any) that compact fluorescent lamps (CFL's) have as compared to tungsten filament lamps.

<u>advantages</u>	<u>disadvantages</u>

10. List one common application for each of the following lamps

Low pressure sodium vapour

Neon

High pressure sodium vapour

11. Which one of the following lamps is considered the most **efficacious** for general lighting purposes? Circle the one.

- A. Incandescent
- B. Quartz Halogen
- C. CFL
- D. Mercury Vapour
- E. Metal Halide
- F. LED



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12. What is the precaution to be taken when working with a Black UV lamp?

13. List one advantage and one disadvantage when using LED lighting?

14. The colour output of a discharge lamp depends upon 3 factors. What are they?

15. Name four advantages of High pressure Mercury vapour lamps over the medium pressure units?

16. List the general requirements that must be considered for lighting design?



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17. Explain the operational differences between “Sustained”, “Non-maintained” and “Maintained” emergency evacuation lighting types?

18. Can a standard BC Batten holder be installed 1.5m above the ground?

AS/NZS3000 Clause number_____

19. What is the default minimum clearance above a recessed luminaire?

AS/NZS3000 Clause number_____

20. What is the minimum horizontal illuminance at floor level for an area fitted with emergency exit signs (according to AS2298.1:2005)?

END OF ASSESSMENT