



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Complete, fold and seal
(see note 2 below)

SURNAME: ALnaqbi

FORENAME(S): Khelifa Saif

12 Pages

Instructions to Candidates

1. Please give the information requested in the boxes below.
2. Enter your name in the space provided to the right, fold over and seal down (using the label provided) to hide your name.
3. The answers must be legibly written. The Examiners can either ignore illegible script or have it typed and the expense of typing charged to the candidate.
4. Write your answers in ink.
5. Begin each answer on a fresh page. Do all rough work in the answer book and cross it through.
6. No part of this book is to be torn out; it must be handed in complete.
7. If more books than one are used, fasten them together using the tags available from the invigilator(s).
8. **Every book must be handed in. In no circumstances may answer books, used or unused, be taken out of the examination venue.**

1	Student Number	ALN20854464
2	Title of Examination Paper	Design of electrical installations
3	Module Code	Goeep 4061 m4 X00920
4	Date and Time of Examination	12-1-2022 14:00
5	Examination Venue	Gower College
6	Seat Number	2
7	Number of Answer Books handed in	

[illegible]

✓ Kf

(Q 1) Khelifa
(A)

8m

$$7 \times 1.5 \text{ mm}^2, (6 \times 2.5 \text{ mm}^2) \quad 7 \times 6 \text{ mm}^2$$

$$3 \times 10 \text{ mm}^2$$

$$\frac{(7 \times 1.5 + 6 \times 2.5 + 7 \times 6 + 3 \times 10)}{8}$$

$$= 86.25 \text{ mm}^2$$

(B)

$$10 \text{ mm}^2$$

$$(57)$$

$$10 \text{ mm}^2$$

$$(50)$$

$$\frac{10 \times 10}{10} = \frac{100}{10} = 100 \text{ mm}^2$$

installed in the trunking of (57, 50)

Q2

(A) - 120 Amp on Brown Phase.

- 230 Amp on Black Phase.

- 90 Amp on Grey Phase.

determine the neutral current

$$(120 = \frac{230}{\sqrt{3}}) \quad (120 = \frac{b \times r}{b \times r})$$

$$= 306 \text{ m (Amp)}$$

(B) if loads be partly rectified or non.

$$120 \cdot 230 \cdot 90 \text{ Amp}$$

Q 2

(C)

I describe the action supply of single one 90 230/20V

Q 3

(A)

- 16m / 45m (16000 lum / 370 lux

$$\frac{16 \times 45 \times 370}{16000} = 16.65 (\text{lamps})$$

$$\frac{u \pm 0.8}{m \pm 0.7}$$

$$(\pm 1.142 \text{ Ass}) / 0.8 \times 0.7 = 0.56 \text{ A}$$

(B)

lev (8m) lum = 8000 cd

~~m = 0.7~~

$$8 \times 800 = 6400 \text{ lum}$$

$$= (1 \times 10^{-3})$$

(C)

I will arrange with 10 lions

lum sketch 8 / 8000 / 1645 / 16000

Q 4

(A) (B)

$$Z_s = Z_e + \frac{(R_1 + R_2) L 1.2}{1000}$$

$$S = \frac{\sqrt{1^2 + 4}}{K}$$

$$Z_0 = 38$$

$$32m = 34^c$$

$$\frac{70^c}{34^c} / Z_e = 0.58 \Omega$$

X

$$32m - 384 \quad A + N$$

0

✓

Q 5

$$230V$$

$$Z_e = 0.35 \Omega$$

$$6m^2$$

$$70^c$$

$$75m$$

(a)

$$= 230 \pm 0.35$$

$$6m \times 70 \times 75$$

$$= 31500 m^2$$

X

0

✓

$$B =$$

$$32A \div 160A = 5120$$

$$\div = 0.2(A)$$

$$= 110$$

Q6

Q6

(A)-

in electrical insulator when conductivity
 increases I ~~the~~ give example
 it will be exple to metal with
 same as two

(B) ~~when p me sys~~

when p me system require additional
 electrical it have reason ~~for~~
 out is go and second will
 take planet to hard

(C) a TV-cable system is buried
 homes or far from fire
 but if exple is go to
 earth same time.



Q6

(C)

~~One~~ p

one possible advance win TNCS carts
 come explain a TF cart is taken
 out then TNCS cart
 but TF over a TNCS

X

0

✓