higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE: ELECTRICAL DRAUGHTING

13 APRIL 2018

This marking guideline consists of 6 pages.

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MARK ALLOCATION SUMMARY							
ELEMENT	**QUESTION**	**1**	**2**	**3**	**4**	**5**	**%**
Balanced layout and size		0	5	5	3	4	**17%**
Correctness		10	5	10	5	7	**37%**
Lettering		0	15	5	2	5	**27%**
Line work and neatness		0	5	5	5	4	**19%**
TOTAL:		**10**	**30**	**25**	**15**	**20**	**100%**

QUESTION 1: GENERAL THEORY

1.1 Required flux:

$$\Phi = \frac{E_{av} \times A}{M \times CU \times LLD}$$

✓ ✓

$$= \frac{500 \times (7 \times 10)}{0,8 \times 0,54 \times 0,8}$$

✓ ✓

$$= 101\,273,148 \text{ lm} \quad ✓$$

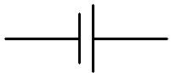
(5)

1.2 1.2.1 16 mm²
1.2.2 6 – 10 mm²
1.2.3 4 mm²
1.2.4 2,5 – 4 mm²
1.2.5 1,5 mm²

(5 × 1) (5)
[10]

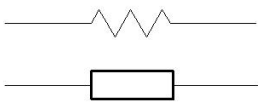
QUESTION 2: GRAPHICAL SYMBOLS AND ELECTRONIC DIAGRAMS

2.1



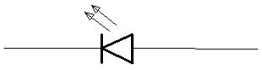
Cell

2.2



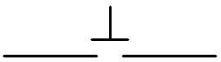
Resistor

2.3



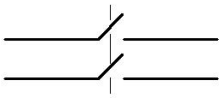
LED

2.4



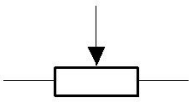
Push switch

2.5



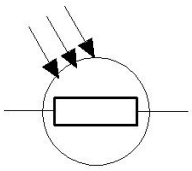
Rocker switch

2.6



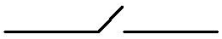
Preset resistor

2.7



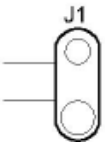
LDR

2.8



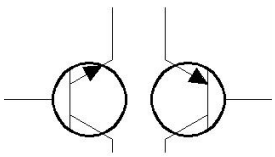
Toggle switch

2.9



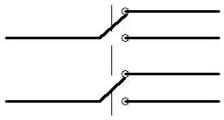
Battery clip

2.10



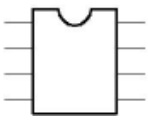
Transistor

2.11



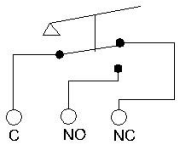
Slide switch

2.12



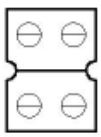
Integrated circuit

2.13



Microswitch

2.14



Connector

2.15

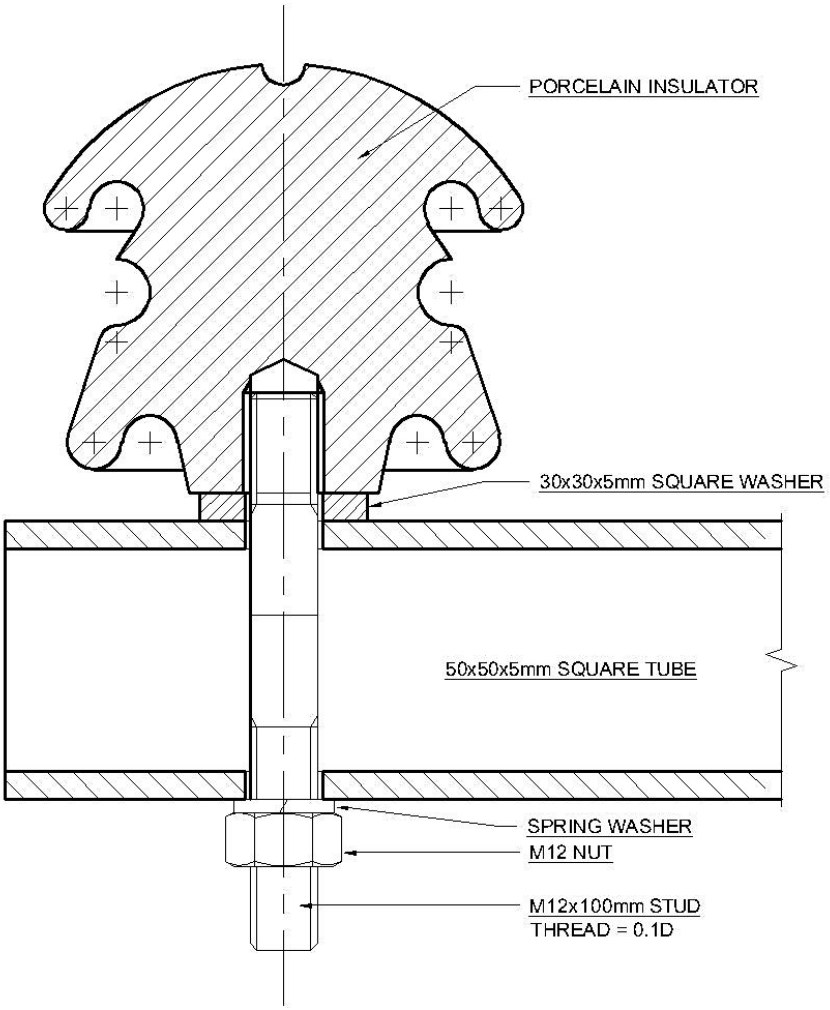


Motor

Balanced layout and size	5 × 1 = 5	
Correctness	5 × 1 = 5	
Lettering	15	
Line work and neatness	5 × 1 = 5	**[30]**

[30]

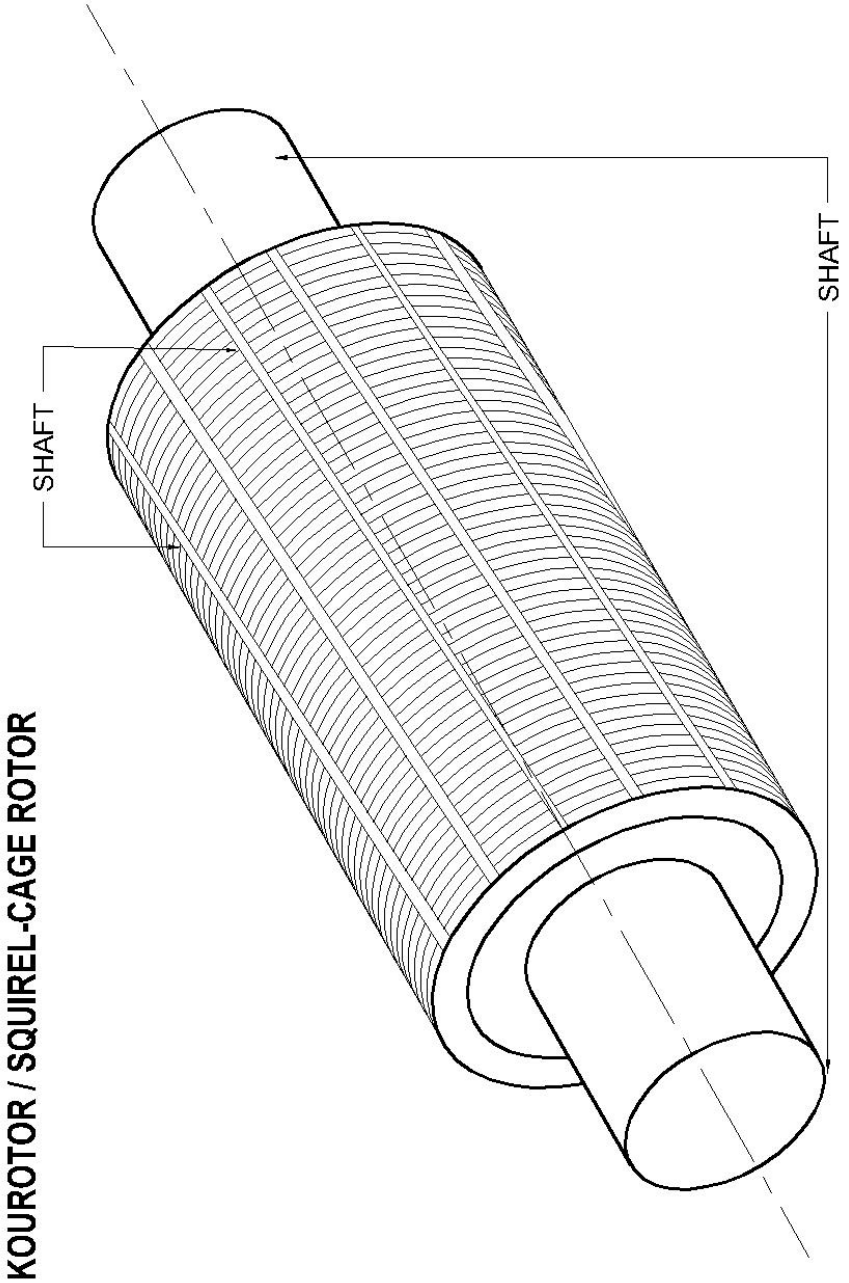
QUESTION 3: GENERATION AND DISTRIBUTION OF ELECTRICITY



Balanced layout and size	**5**	
Correctness	**10**	
Lettering	**5**	
Line work and neatness	**5**	**[25]**

[25]

QUESTION 4: ELECTRICAL MOTORS AND CONTROL DEVICES

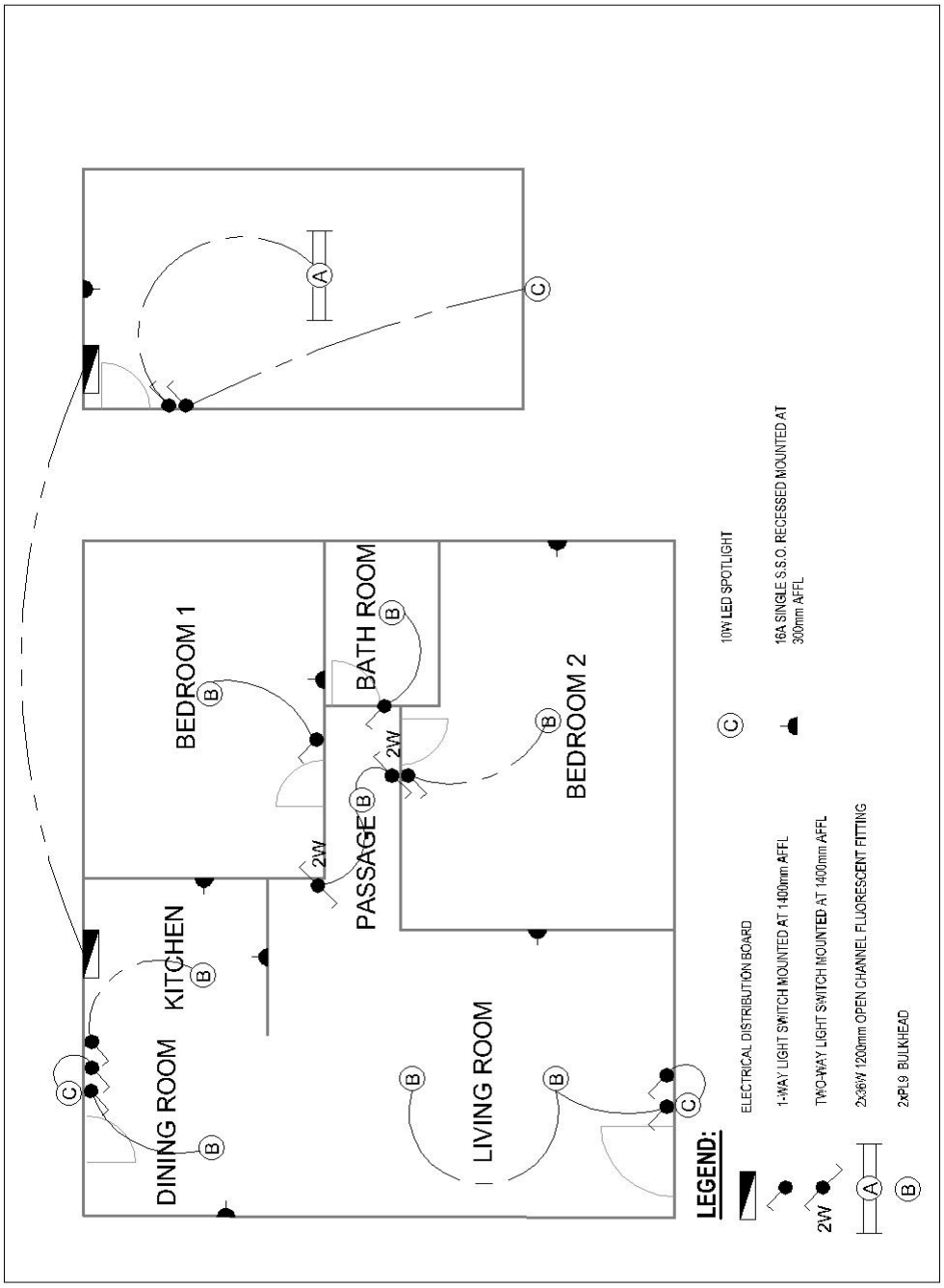


KOUROTOR / SQUIREL-CAGE ROTOR

Balanced layout and size	**3**	
Correctness	**5**	
Lettering	**2**	
Line work and neatness	**5**	**[15]**

[15]

QUESTION 5: WIRING OF PREMISES



Balanced layout and size	**4**	
Correctness	**7**	
Lettering	**5**	
Line work and neatness	**4**	**[20]**

[20]

TOTAL: 100

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