higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

MULTI-DISCIPLINARY DRAWING OFFICE PRACTICE: ELECTRICAL DRAUGHTING

23 April 2021

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	4	5	4	**18%**
Correctness		20	10	6	5	7	**48%**
Lettering		0	-	5	5	5	**15%**
Linework and neatness		0	5	5	5	4	**19%**
Total		**20**	**20**	**20**	**20**	**20**	**100%**

QUESTION 1: GENERAL THEORY

1.1 $$Total\ flux\ required: \Phi = \frac{E_{av} \times A}{M \times CU \times LLD}$$
$$= \frac{30 \times (20 \times 14)\ ✓}{0{,}8 \times 0{,}54 \times 0{,}8\ ✓}$$
$$= 24\ 305{,}556\ lm\ ✓✓$$ (5)

1.2. 1.2.1 Allow an electric current✓ to pass in one direction and rectifying bridge✓

1.2.2 Used to amplify✓ or switch electronic signals✓

1.2.3 Used to reduce current flow, adjust signal levels, to divide voltages, bias active elements, and terminate transmission lines. ✓✓ (Any × 2)

1.2.4 It blocks the flow of DC✓ and permits the flow of AC.✓

1.2.5 To store electrical power✓ and to supply✓ electrical power to a circuit.

(5 × 2) (10)

1.3. 1.3.1 10142 or SANS 10142

1.3.2 nano

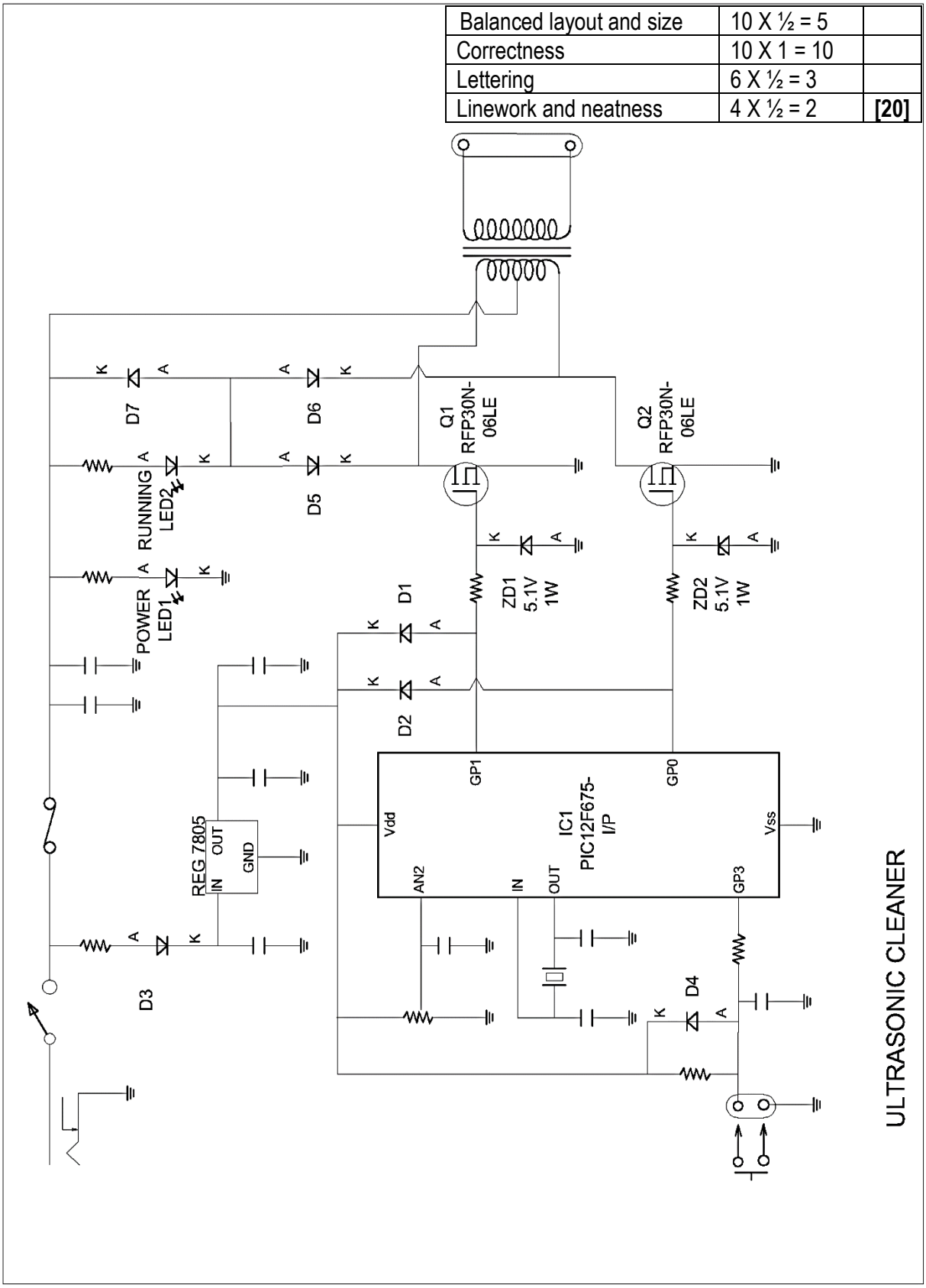
(2 × 1) (2)

1.4 The resistance decreases✓ with increasing✓ temperature. Materials: carbon, silicon, germanium✓ (any material). (3)

[20]

QUESTION 2: GRAPHICAL SYMBOLS

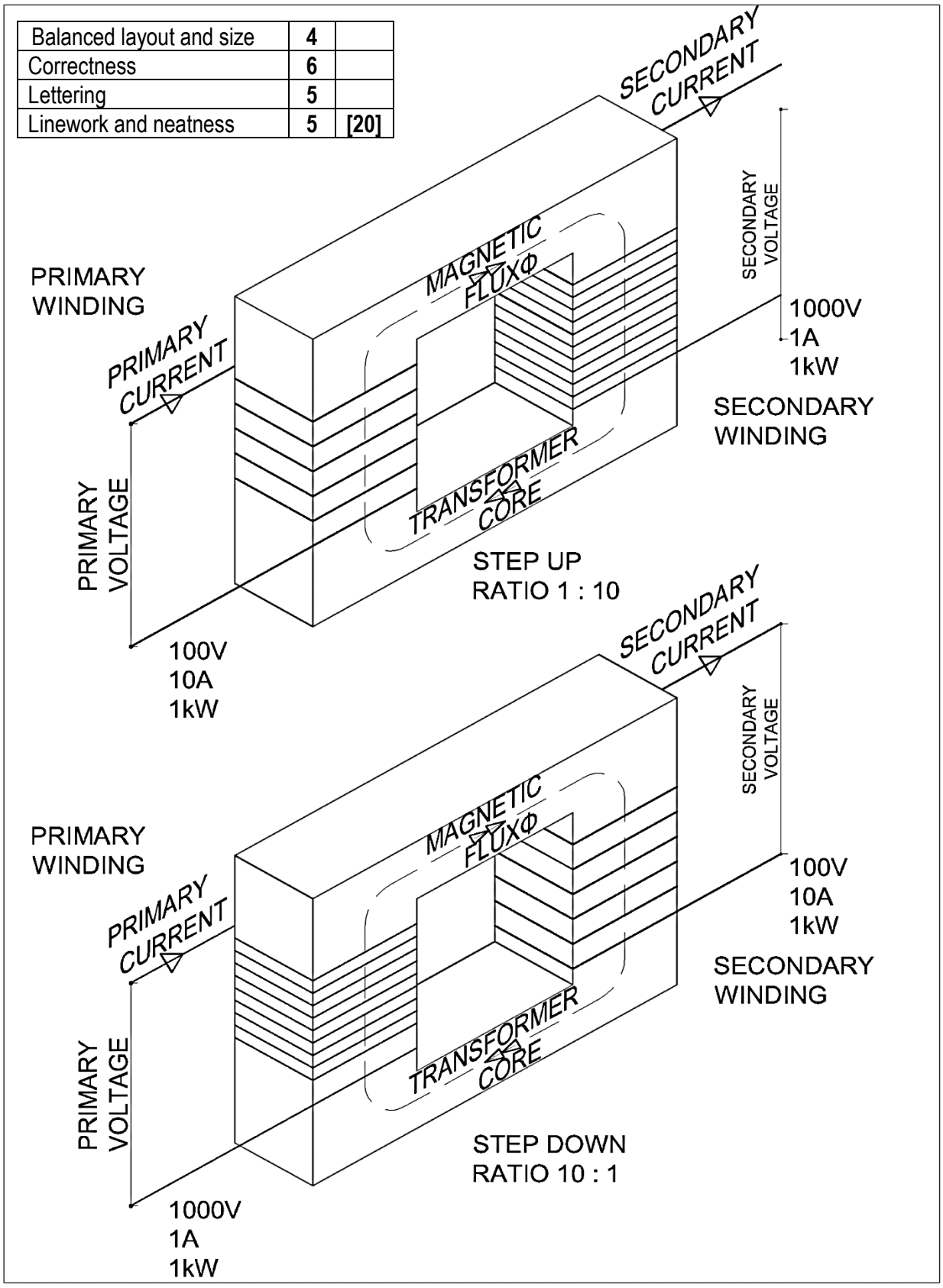
Balanced layout and size	10 X ½ = 5	
Correctness	10 X 1 = 10	
Lettering	6 X ½ = 3	
Linework and neatness	4 X ½ = 2	**[20]**



[20]

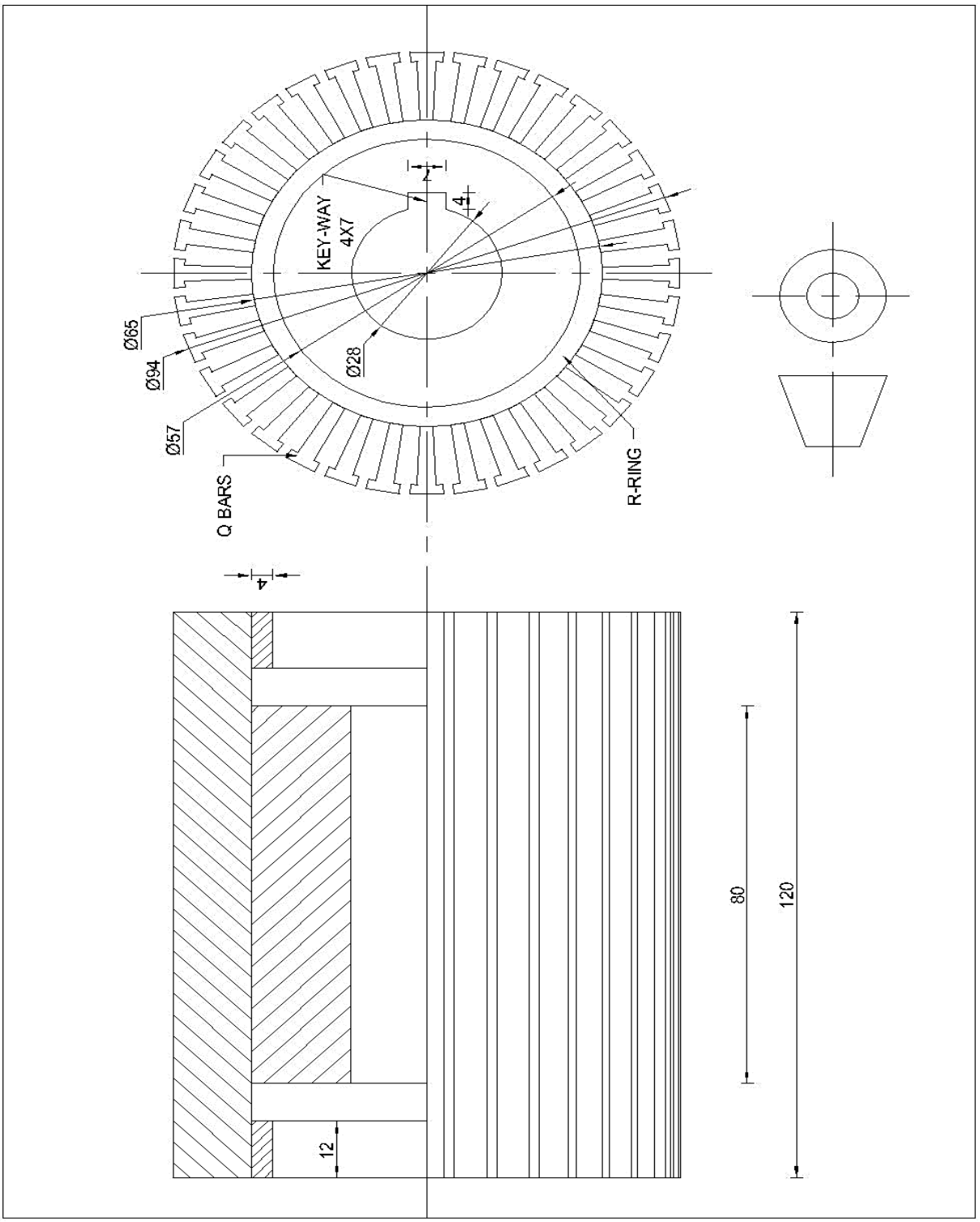
QUESTION 3: GENERATION AND DISTRIBUTION OF ELECTRICITY

Balanced layout and size	4	
Correctness	6	
Lettering	5	
Linework and neatness	5	[20]



[20]

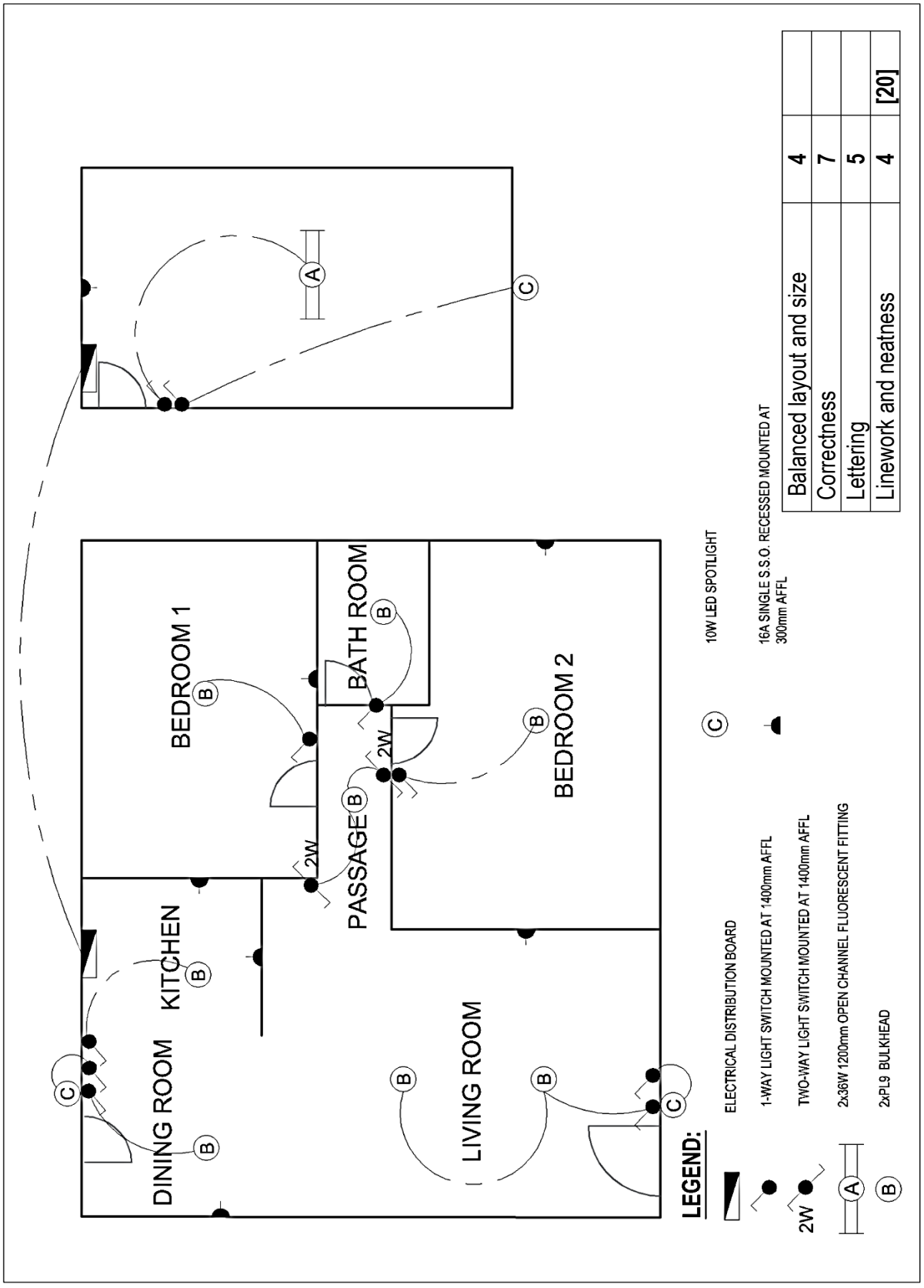
QUESTION 4: ELECTRICAL MOTORS AND CONTROL DEVICES



Balanced layout and size	**5**	
Correctness	**5**	
Lettering	**5**	
Linework and neatness	**5**	**[20]**

[20]

QUESTION 5: WIRING OF PREMISES



Balanced layout and size	4	
Correctness	7	
Lettering	5	
Linework and neatness	4	[20]

[20]

TOTAL: 100

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