

SECTION A : part 1. TECHNICO DRAWING

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Q1) The components of the drawing pencils are.

- 1) Graphite (lead) 0.25
- 2) Clay binder or polymer binder (Wood cover) 0.25

- Q2) b)
- | | |
|-------------------------|-----|
| $A_0 = 841 \times 1189$ | 0.5 |
| $A_1 = 594 \times 841$ | 0.5 |
| $A_2 = 420 \times 594$ | 0.5 |
| $A_3 = 297 \times 420$ | 0.5 |
| $A_4 = 210 \times 297$ | 0.5 |
| $A_5 = 148 \times 210$ | 0.5 |
| $A_6 = 105 \times 148$ | 0.5 |
- (Choose only five)

Q2) Standard items found in title block:

- * Name 1
- * Drawing title (Title) 1
- * Drawing Number
- * Sheet revision block / Supervisor / Teacher
- * Approval block
- * Scale
- * Cage Code / profile 1
- * Date 1
- * optin 1
- * class 1

Choose only four

Q3) The sheet layouts are

- Portrait 0.5
- Landscape 0.5

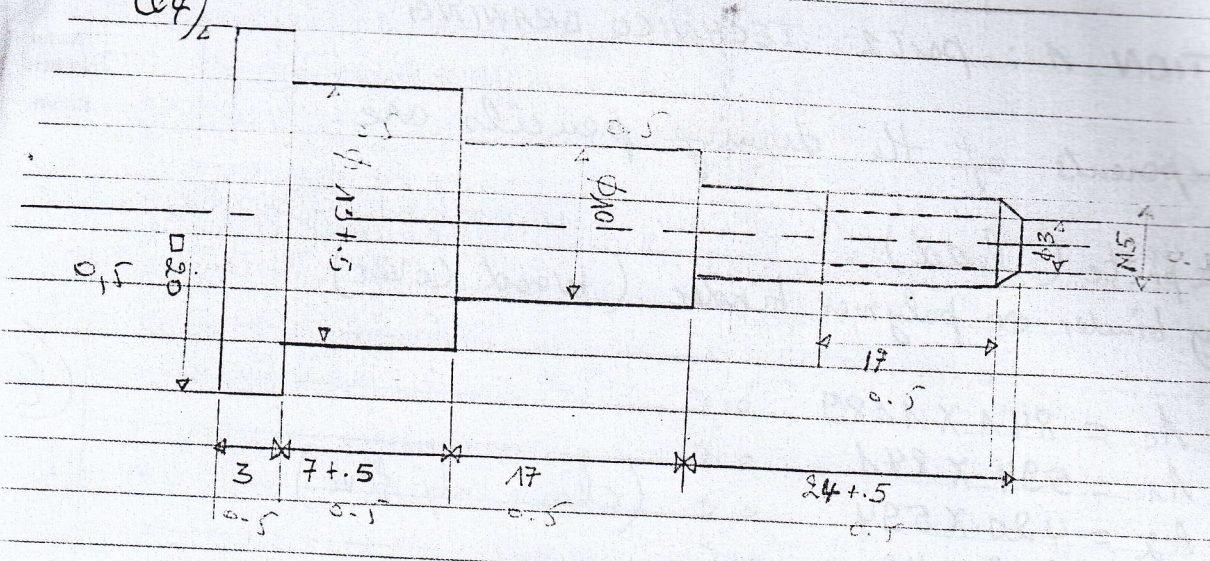
They depend on the shape and size of the object being represented on the drawing

b) Classification of lettering and their characteristics:

- 1) Upper case (Capital letter) : $\frac{10}{10} h$
- 2) Lower case (Small letter) : $\frac{7}{10} h$ 0.5

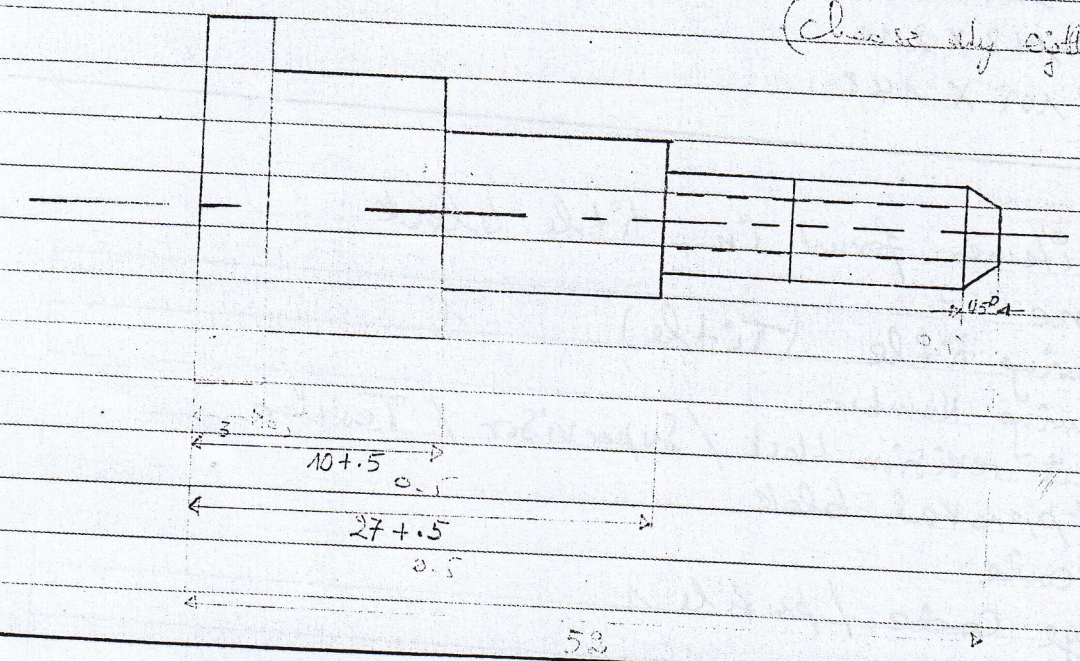
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Q4)



(Choose any sight)

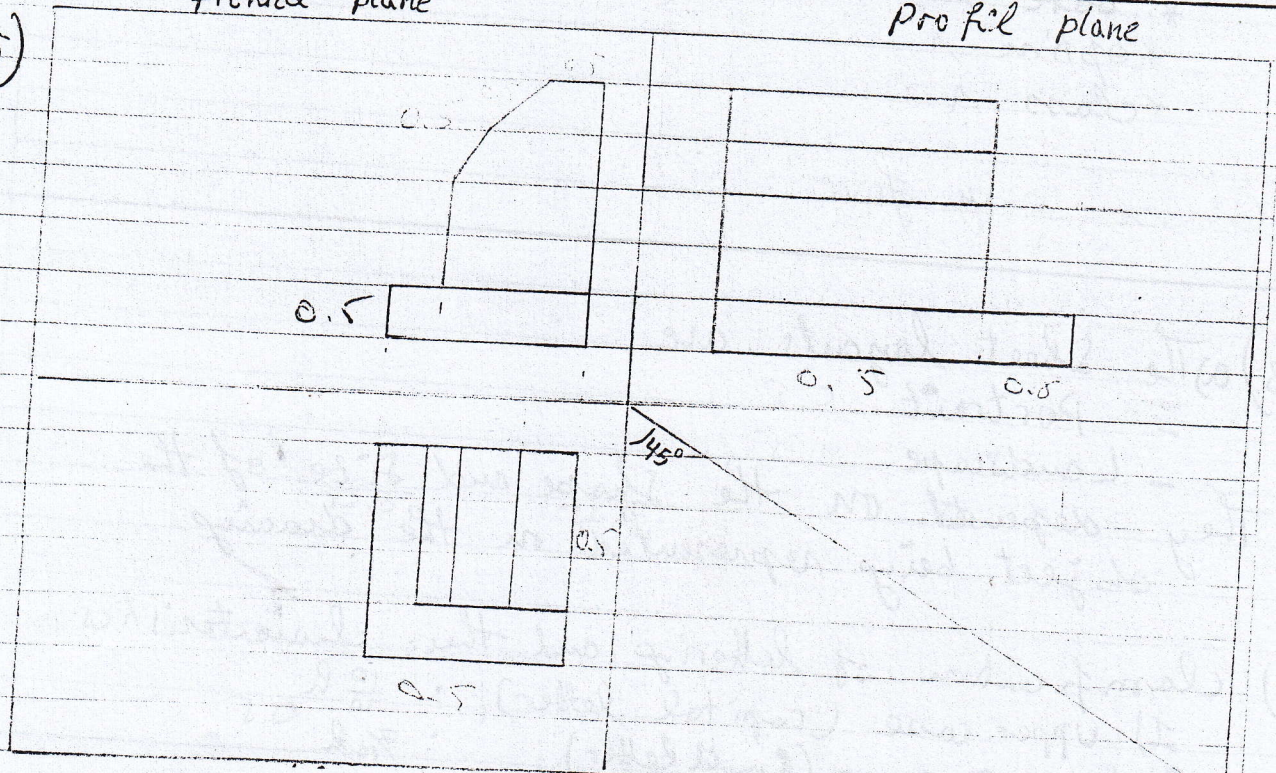
4



Frontal plane

Profile plane

5)



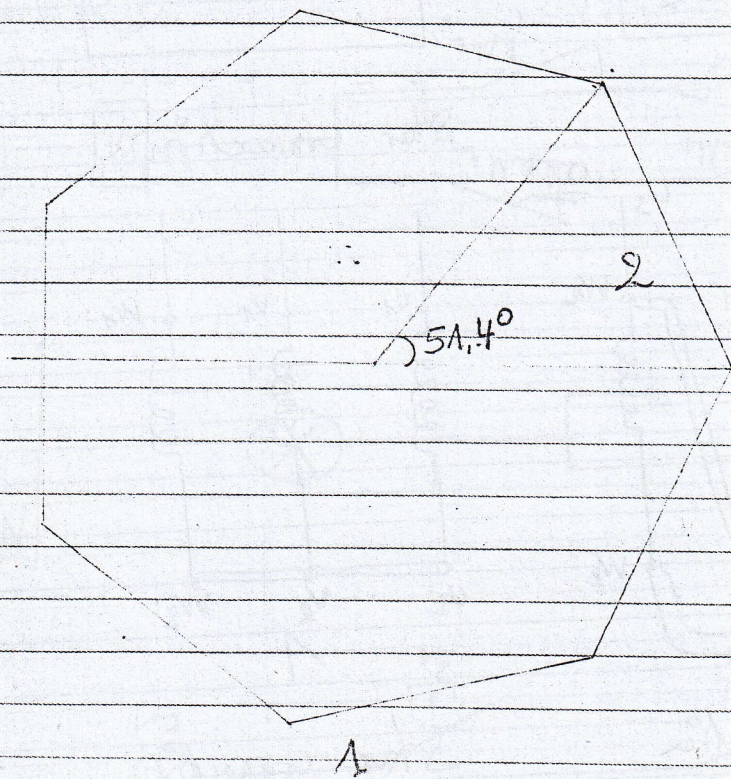
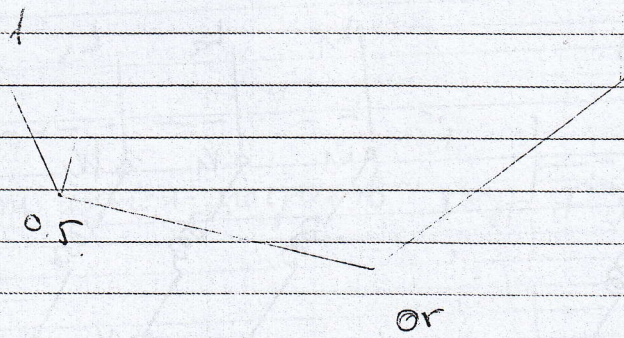
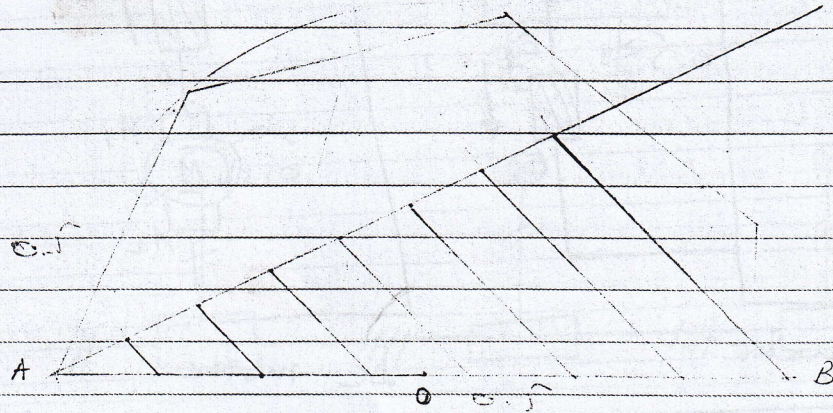
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Q6)

r = 0.5

AB = Diameter = 100mm
radius = 50mm

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Circle = 360°

7 sides and
7 angles

1 angle = $\frac{360^\circ}{7}$
 $= 51.4^\circ$

or

Circ = πD

$= 3.14 \times 100 \text{ mm}$

$= 314 \text{ mm}$

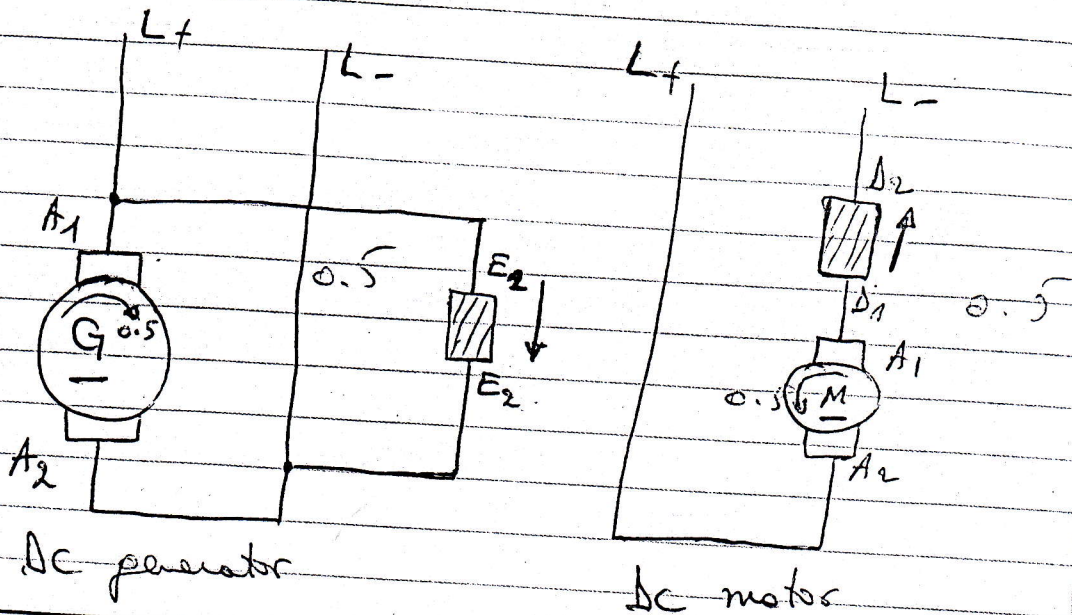
7 sides = 314 mm

1 side = $\frac{314}{7} \text{ mm}$

$= 45 \text{ mm}$

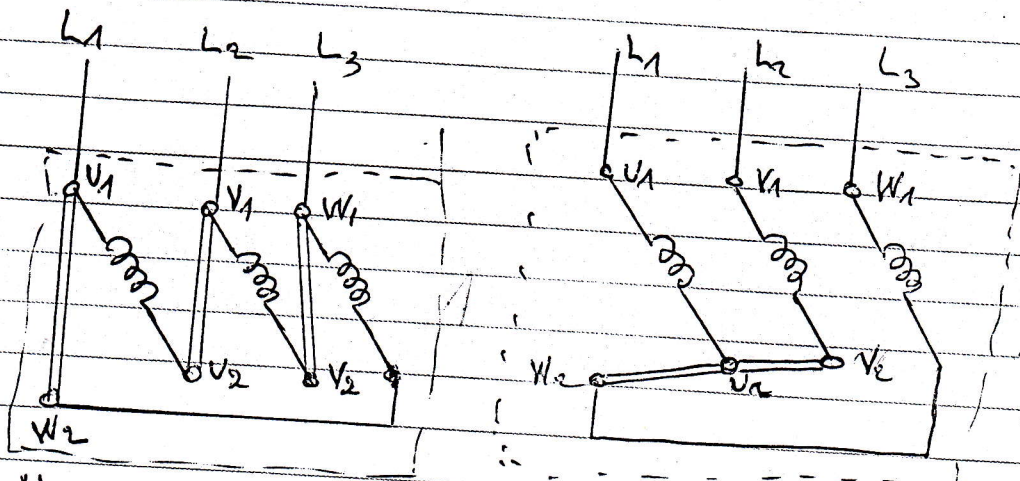
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Q7)



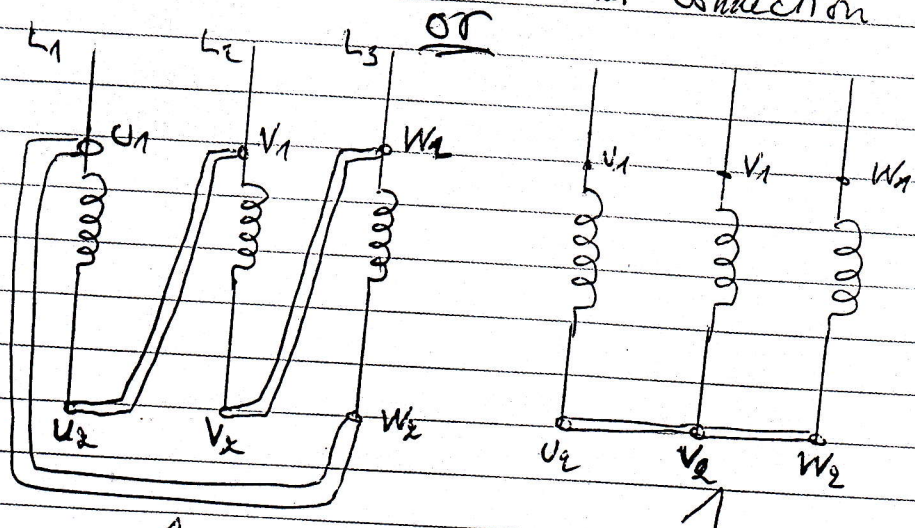
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Q8)



Delta connection

Star connection



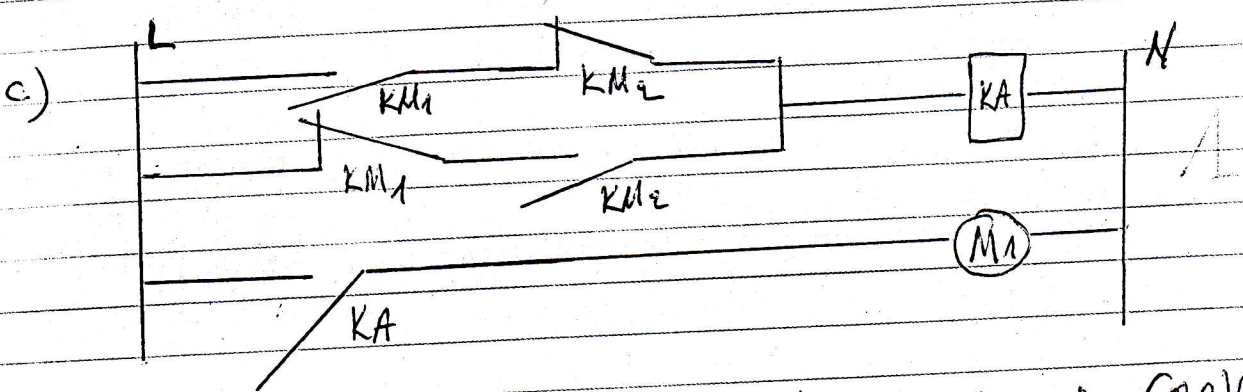
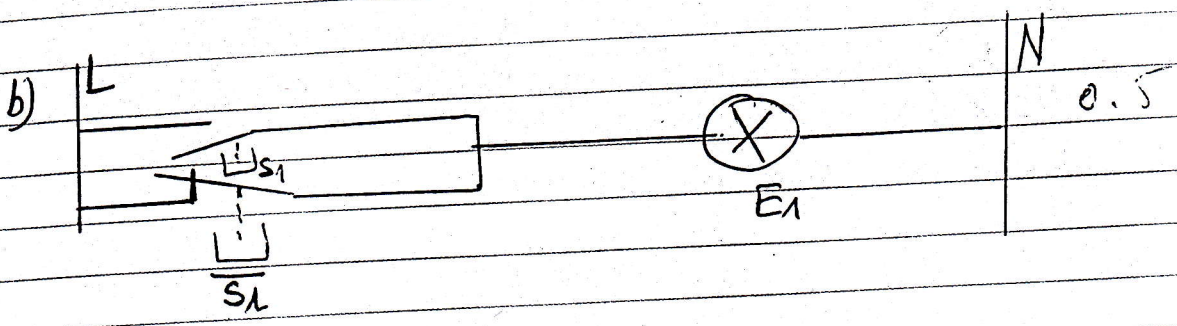
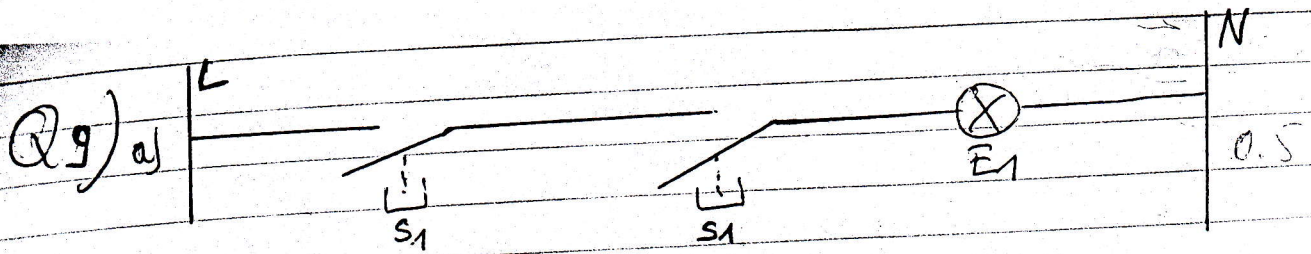
Delta connection

Star connection

2

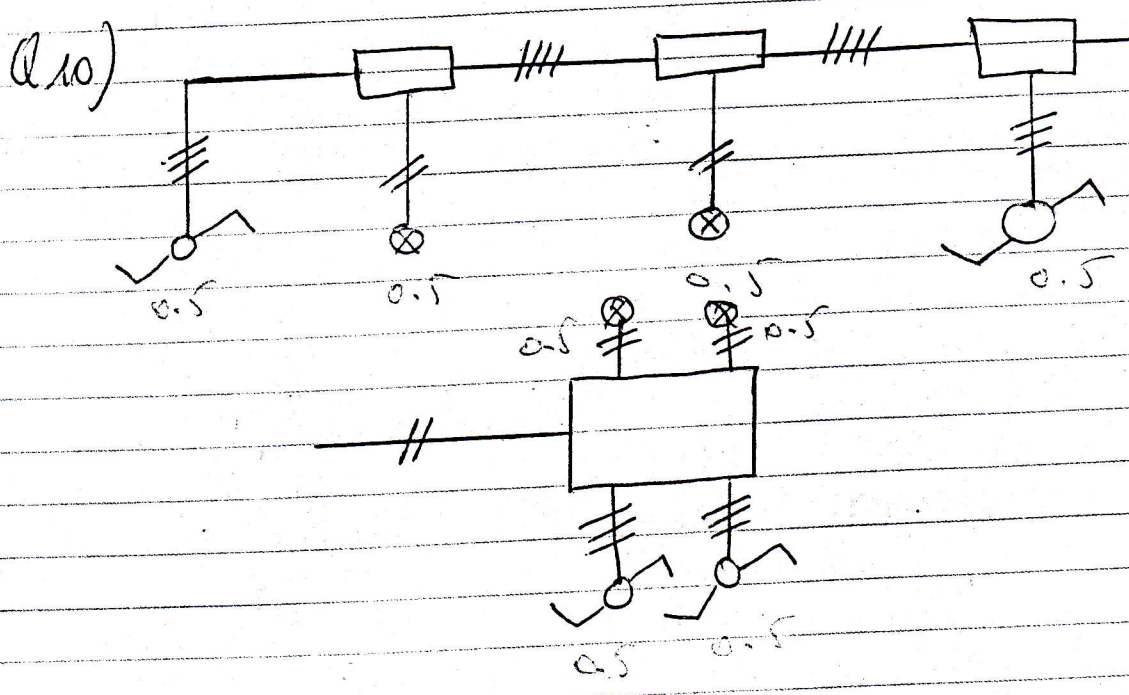
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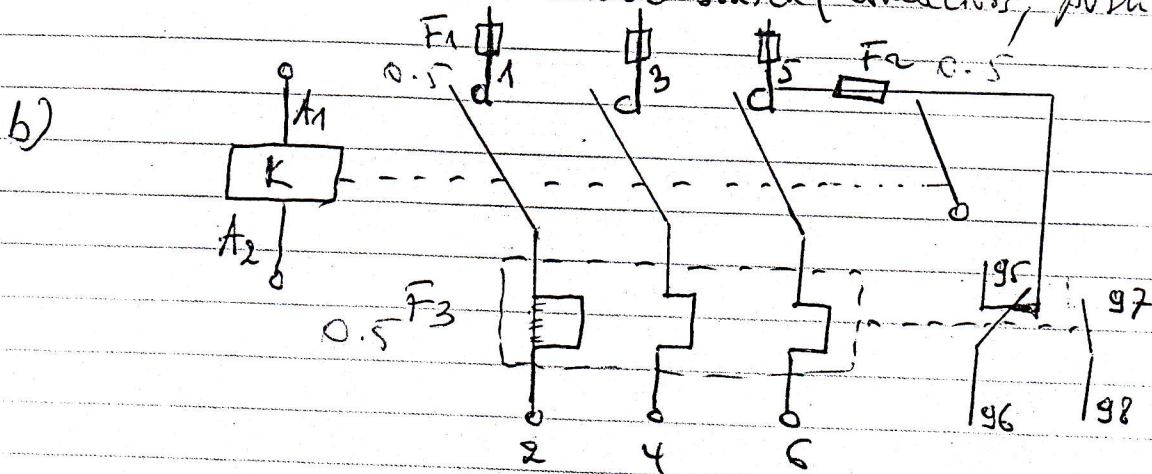
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Note: Due to the fact that, question number nine (Q9)(c) has not been numbered on the question paper, its marks have to be attributed to each student.



2

- Q11) a) 0.5 Manual Switch (three poles, commutator)
 0.5 Automatic Switch (Sensors, contactors)
 0.5 Semi-Automatic Switch (Contactors, push button)



- F₁ : Main circuit Fuse
 F₂ : Control circuit Fuse
 F₃ : Over load protection devices for motors /
 Over load relay / Thermal relay

SECTION A: Part 3 MICRO COMPUTING

Q12)

i) CMD : Command prompt 2

ii) CD : change directory 1

Q13) i) CHDSK : check disk for physical error in hard disk

ii) CHKNTFS : check New technology file system in hard disk.

Q14) i) TCP/IP : Transmission control protocol / Internet protocol.

ii) SMTP : Simple mail transfer protocol.

Q15) i) HTML : Hyper text markup language 1

- * This is a programming language
- * This is a high level language
- * retrieve website

1) HTTP: Hyper text transfer protocol.

- This is a protocol

It is a connection oriented protocol most used in internet.

- It retrieves website from web server.

Date
write
this mark

(4)

Q16) The "TO" and "FROM" of email message information in the message envelope is used by Deliver the email to email client.

(4)

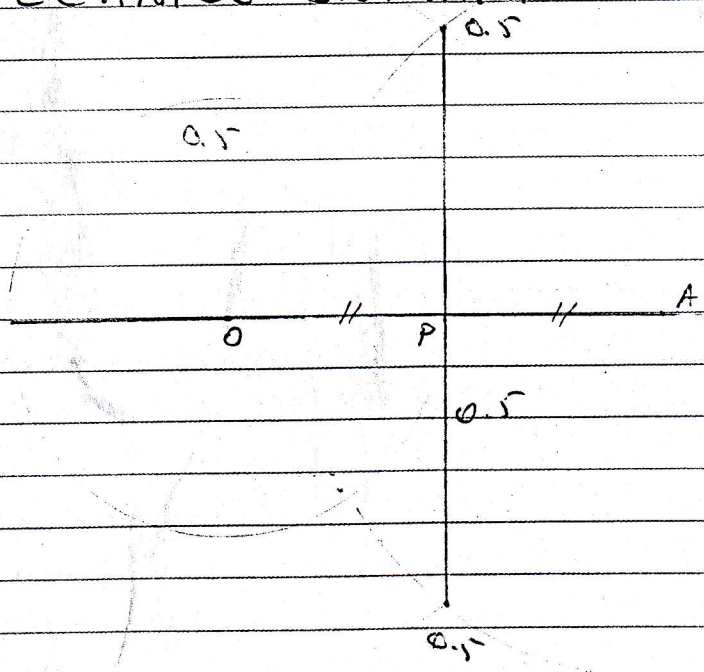
Q17) WWW: World Wide Web.

(5)

SECTION B

Part 1: TECHNICAL DRAWING

Q18)



(5)

Steps: 1. Trace the circle of 30mm of radius and mark point P on the circumference 0.5

2. Trace the line joining the centre O and the point P 0.5

3. extend the line OP and shift the measure OP to obtain the segment PA 0.5

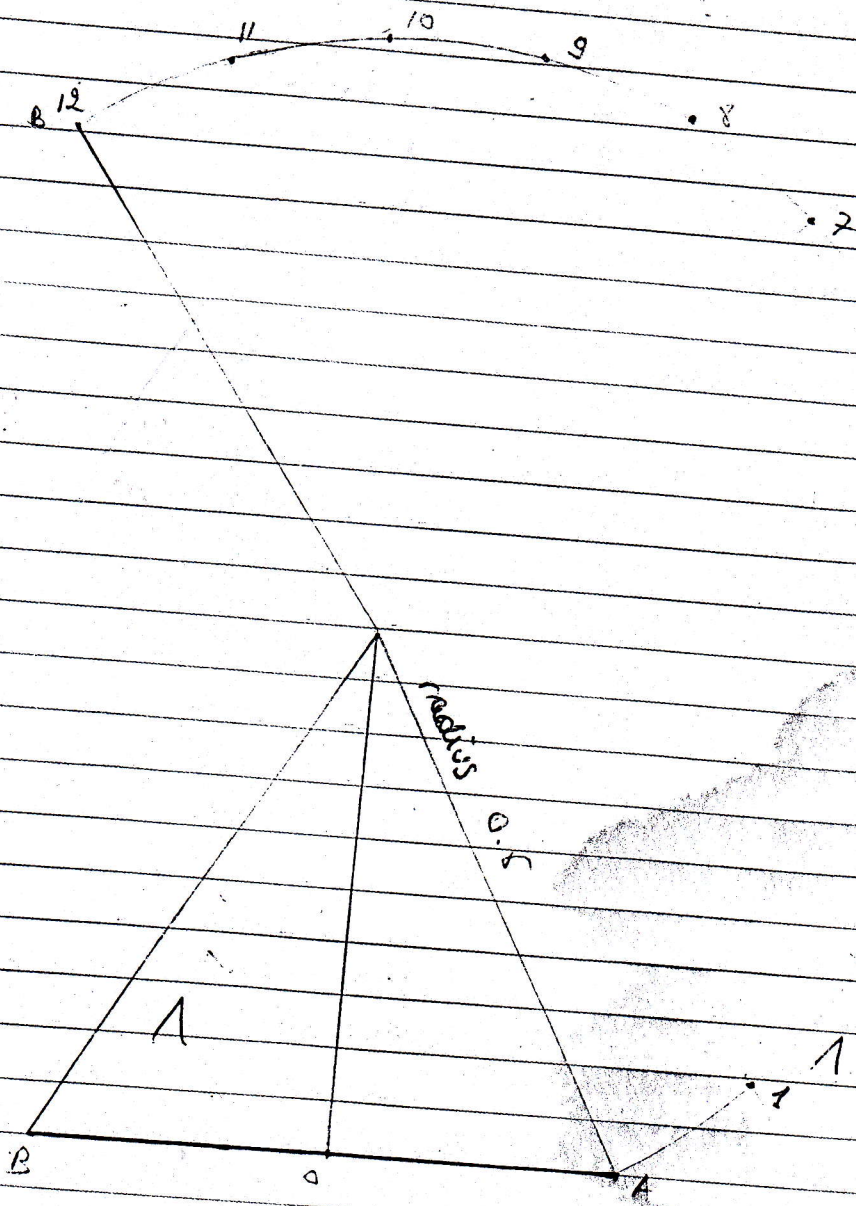
4. Find the bisector of the segment OA 0.5

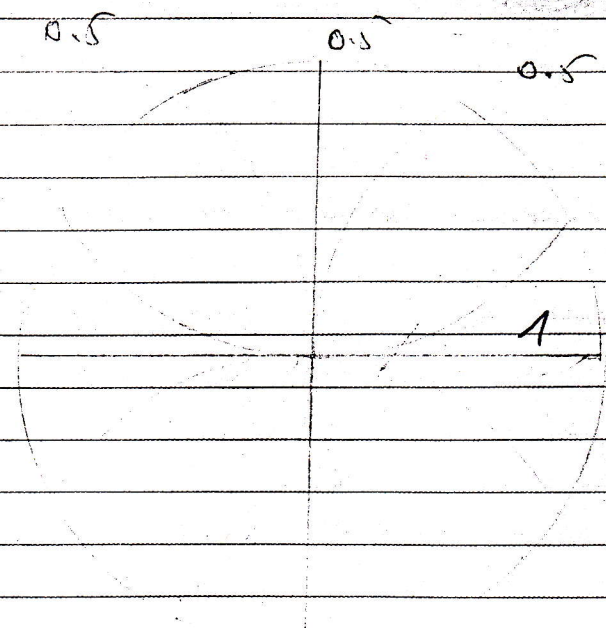
5. Trace the bisector line which the tangent to the circle. o.s

Q19) After figuring out that the question no 19 don't have sufficient information to represent the Volume, we decide to give its marks to all candidates as one view can't be used to represent the inner parts of an object.

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Q20)





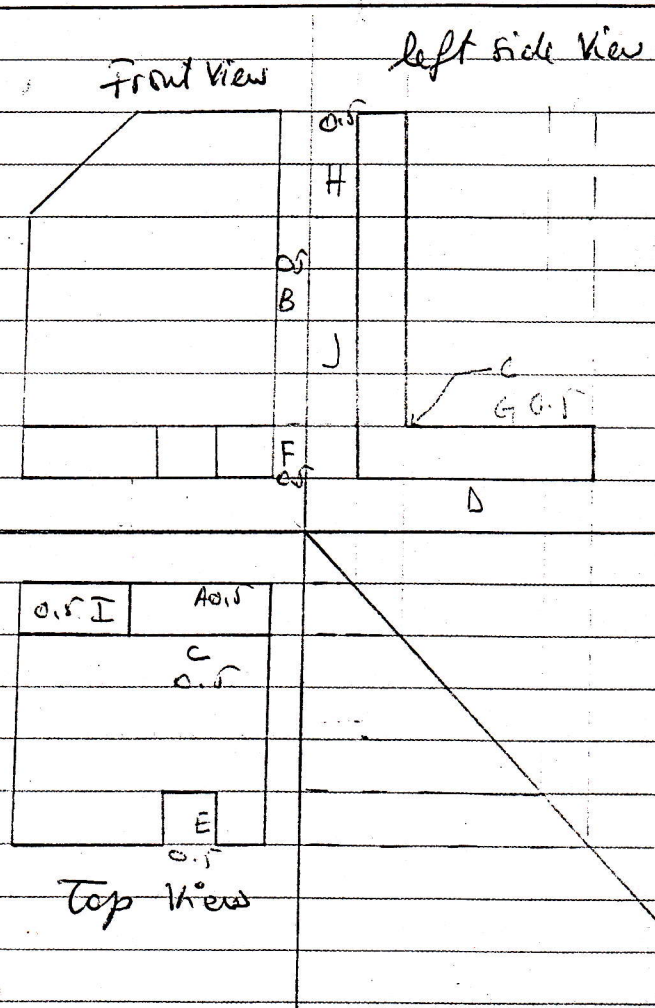
$$\alpha = \frac{360}{12} = 30^\circ$$

$$\text{or side} = \frac{\text{circ}}{12}$$

$$= \frac{\pi D}{12} = \frac{3.14 \times 12}{12}$$

$$= 20.9 \text{ mm} = 21 \text{ mm}$$

Q21)



Each letter in front place value or works.

Q22) a) Dimension should be given on the views which show the relevant features most clearly. A

b) Do not repeat dimensions marked in one view in the another.

c) Dimension should be placed outside the view as possible \uparrow

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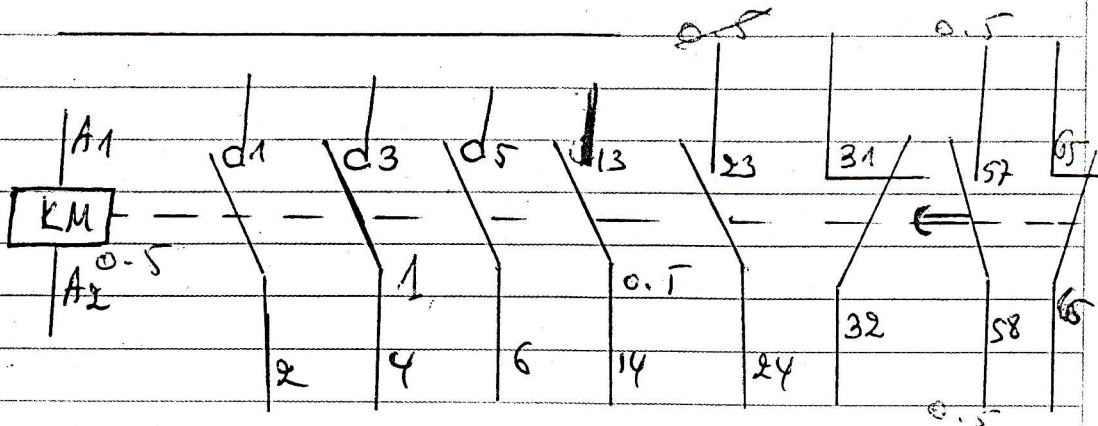
d) Dimension should be taken from visible outline not from hidden line \uparrow

e) Dimension should be given from a base line or centre line of a hole or a finished surface \uparrow

5

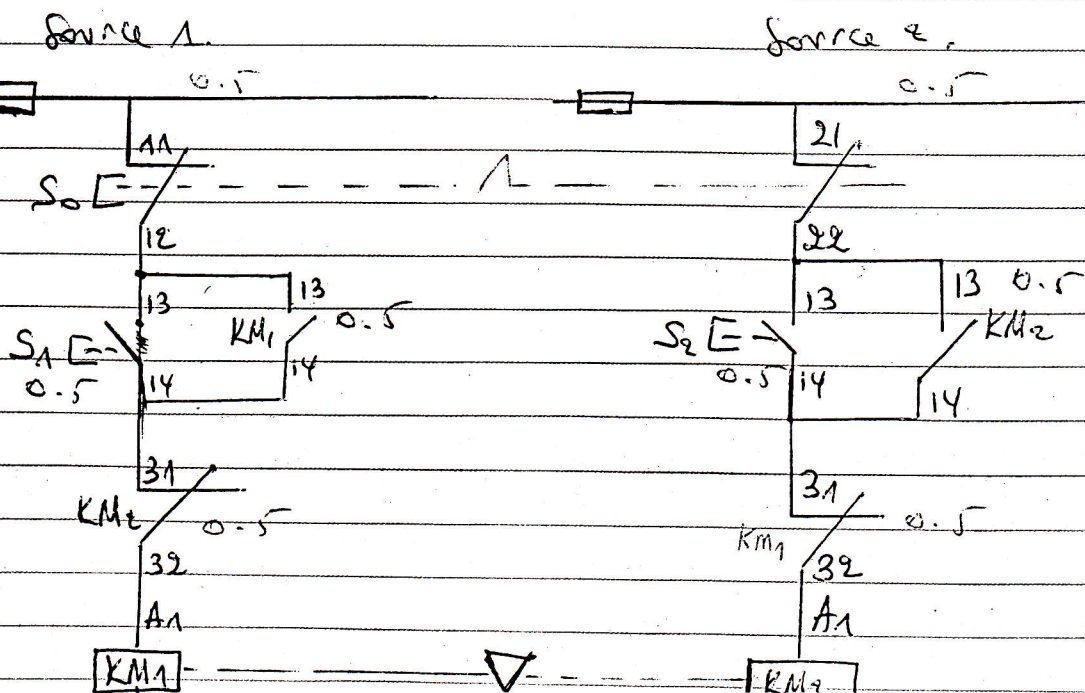
part 9: ELECTRICAL DRAWING

(23)



- 1) Contactor coil (Command element) 0.5
- 2) Main switching elements (Main contacts) 0.5
- 3) Auxiliary switching elements (Auxiliary contact) 0.5
- 4) Instantaneous contacts 0.5
- 5) Delayed contacts 0.5

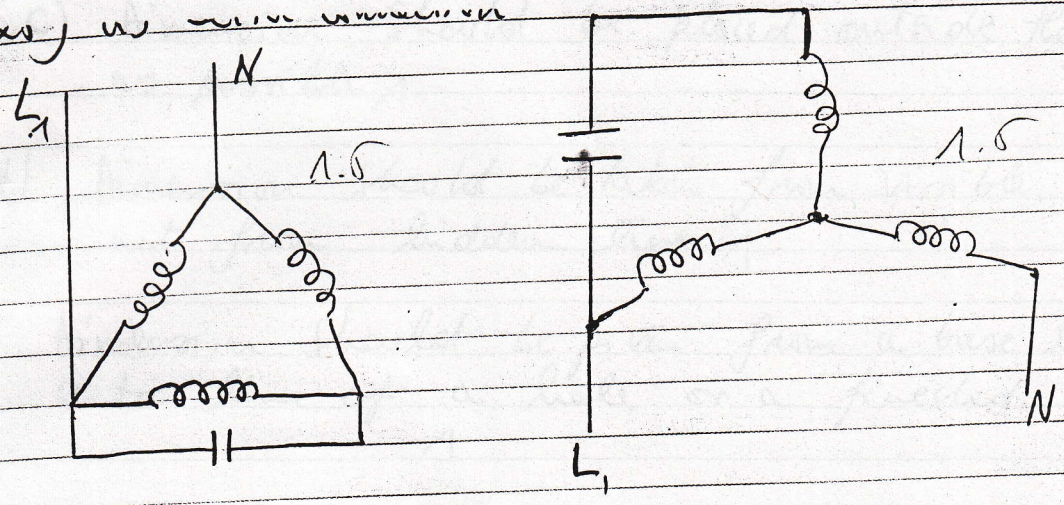
(24)



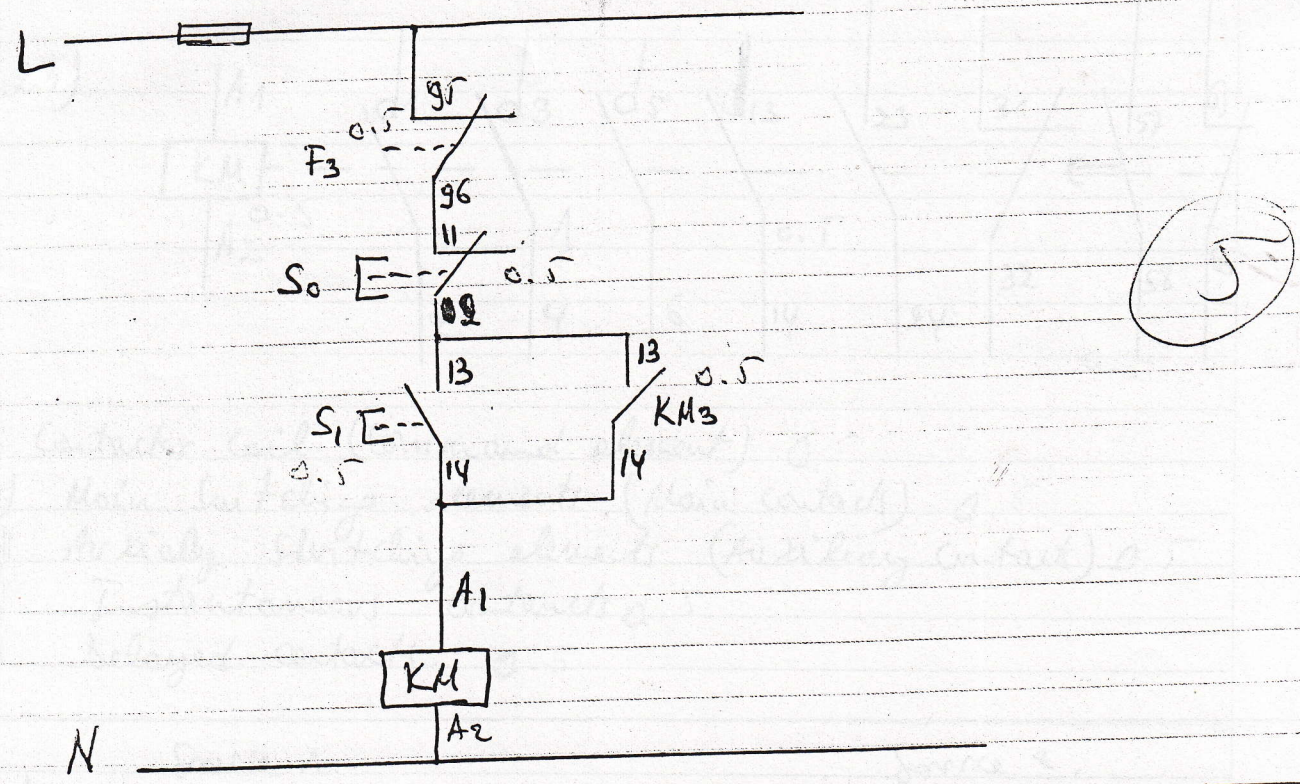
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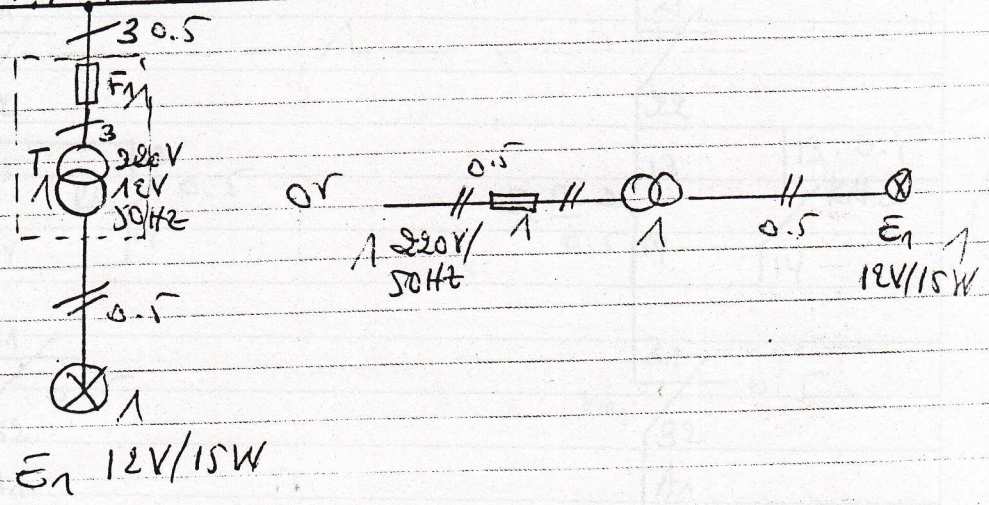


Control circuit



5

Q26) 220V, 1/1N/PE ~ 50 Hz



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(Q27) a) * The message envelope 1
 * The message header, } Sender
 Receiver
 Object
 Content
 CC
 BCC
 Attach file

* The message body 1

b) $\overset{0.5}{=} \overset{0.5}{\text{Min}} (\overset{0.5}{A_1} : \overset{0.5}{A_n})$

(Q28) 5 examples commonly used Application software of Ms office.

5

- a) Ms Word 1
- b) Ms Excel 1
- c) Ms Access 1 Consider only file
- d) Ms Power point 1
- e) Ms Publisher 1
- f) Ms Outlook 1
- g) picture management 1
- h)

(Q29) 4 objects of Ms Access

- a) Table 2
- b) Query 1
- c) Report 1
- d) Form 1

5