

THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL  
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

084

**ELECTRICAL DRAUGHTING**  
(For Both School and Private Candidates)

Time: 3 Hours

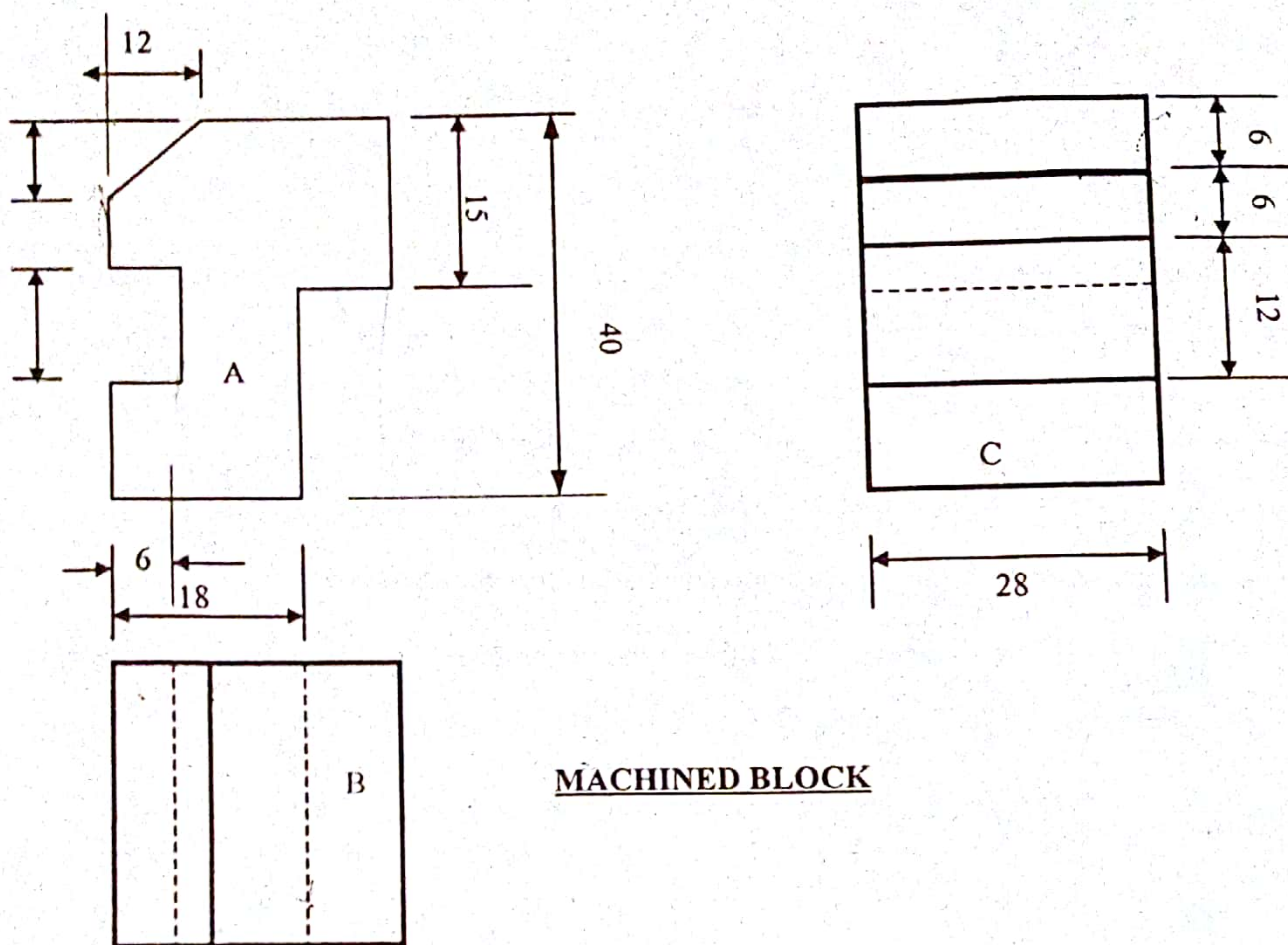
05 November 2002 a.m.

**Instructions**

1. This paper consists of SIX (6) questions.
2. Answer FOUR (4) questions including question Number 1.
3. Cellular phones are not allowed in the examination room.
4. Electronic calculators are not allowed in the examination room.
5. Write your Examination Number on every page of your answer booklet(s).

This paper consists of 3 printed pages

1. The views shown below are full size first angle orthographic projections of a machined block. View B is a plan view projected from view A. Draw the block in isometric projection.



2. Sketch the symbols for the following electronic components:

- (a) PNP transistor
- (b) Diode
- (c) Zener diode
- (d) AND gate
- (e) NOT gate

3. Define the following terms:

- (a) Dogleg
- (b) Crossover
- (c) Artwork
- (d) Logic gate

4. Study the schematic diagram shown in figure 1 below then draw its line diagram indicating the number of conductors used in each section.

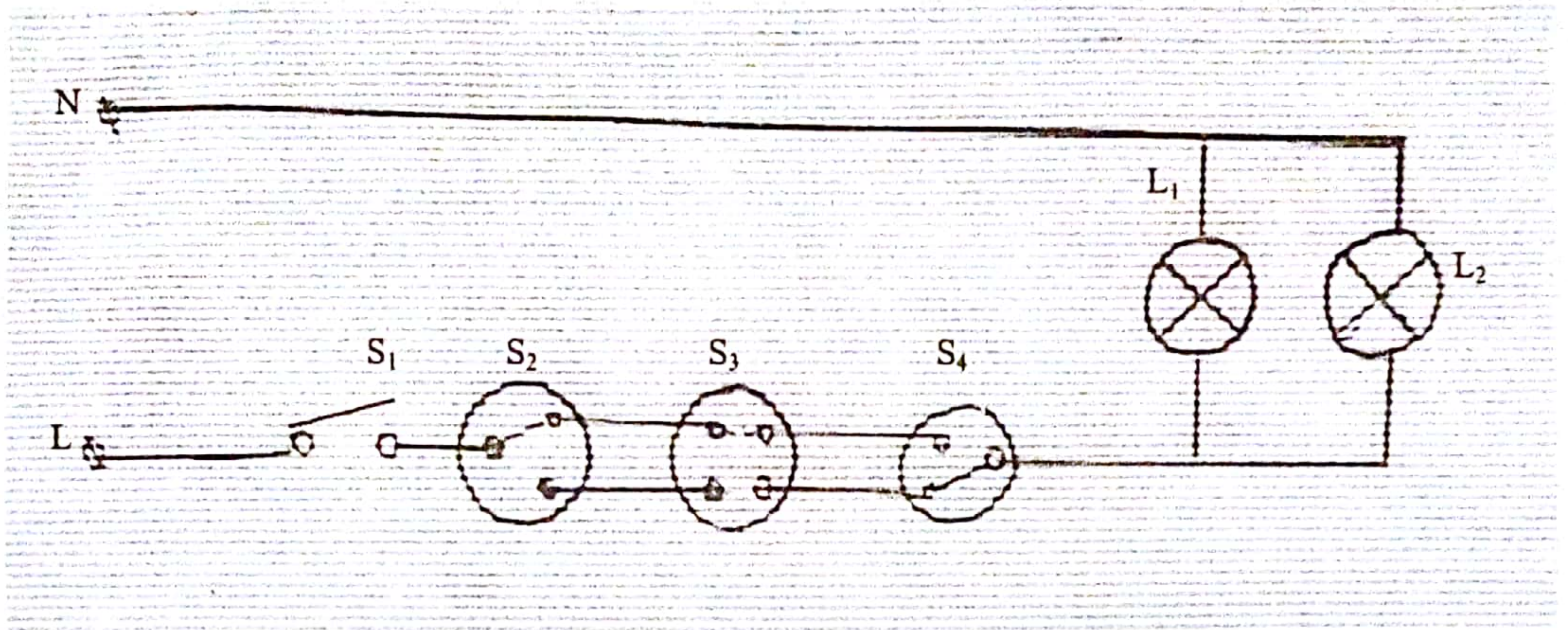


Figure 1

5. Sketch the symbol of the following electrical components:
- Battery
  - Delta connection
  - Combined switch and socket outlet
  - Fan regulator
  - Three phase motor.
6. Re-draw the circuit diagram of Fig. 2 as a formal diagram.

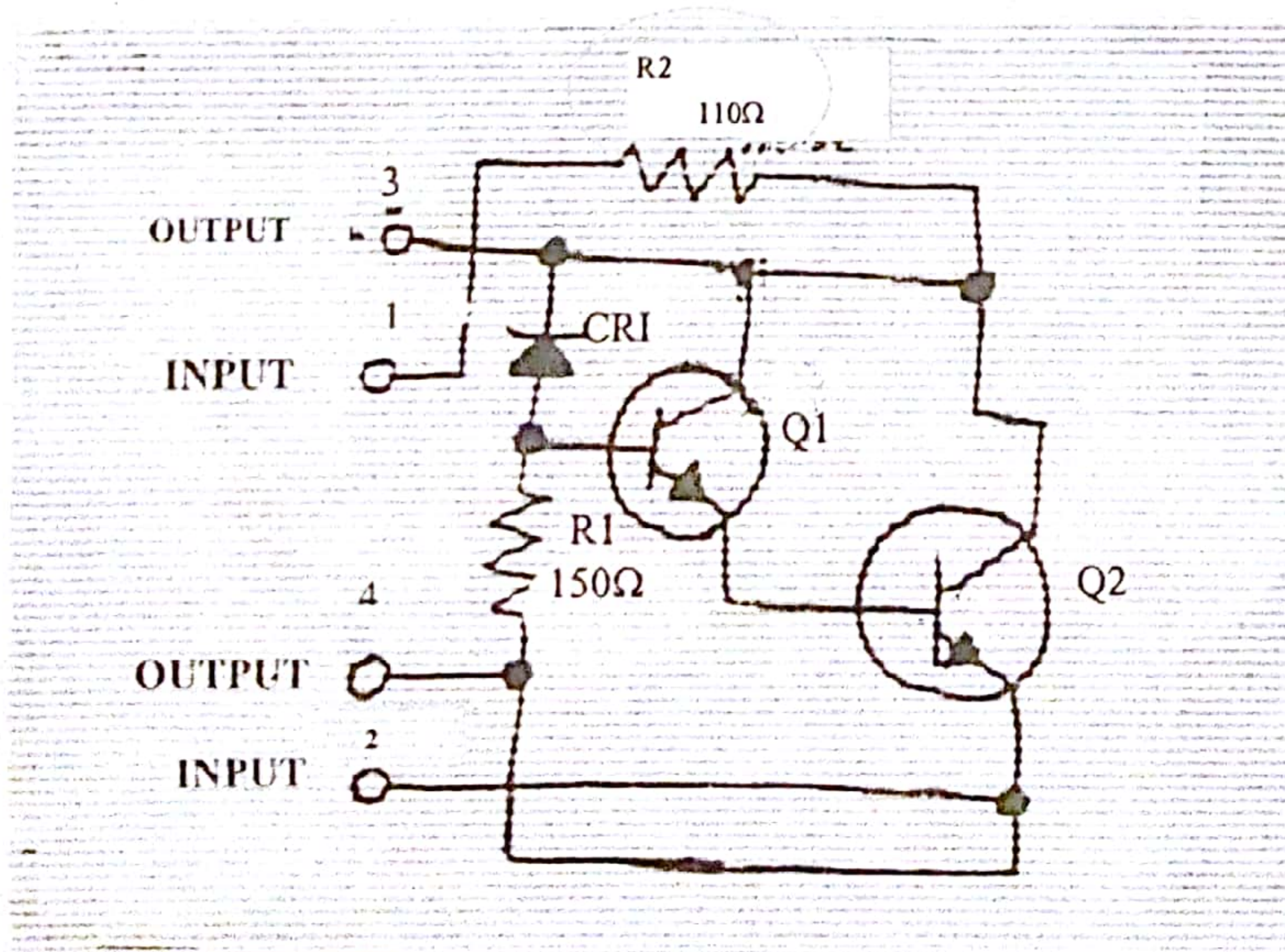


Figure 2