

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

ELECTRICAL DRAUGHTING

(For Both School and Private Candidates)

084

Time: 3 Hours

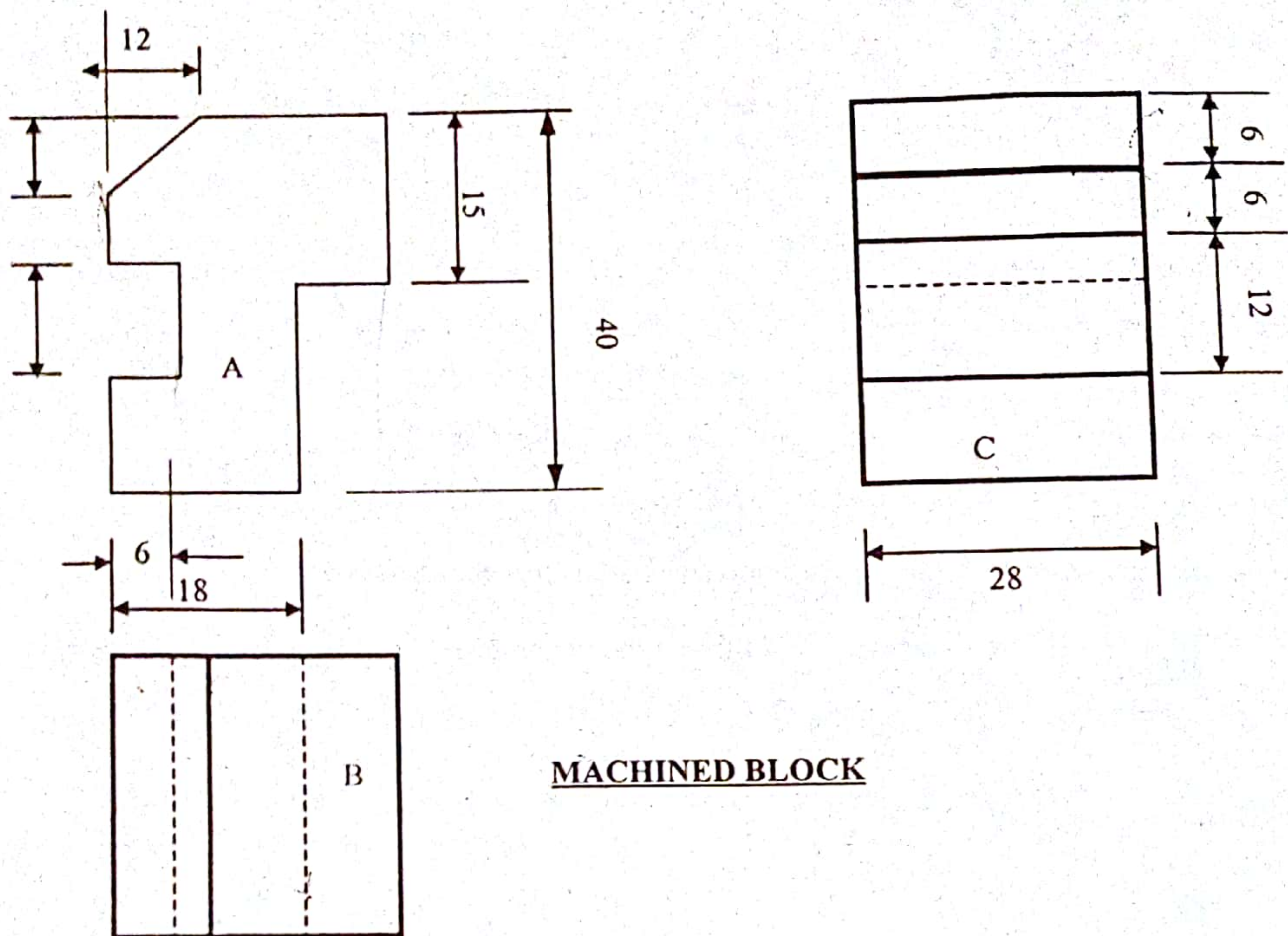
05 November 2002 a.m.

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.

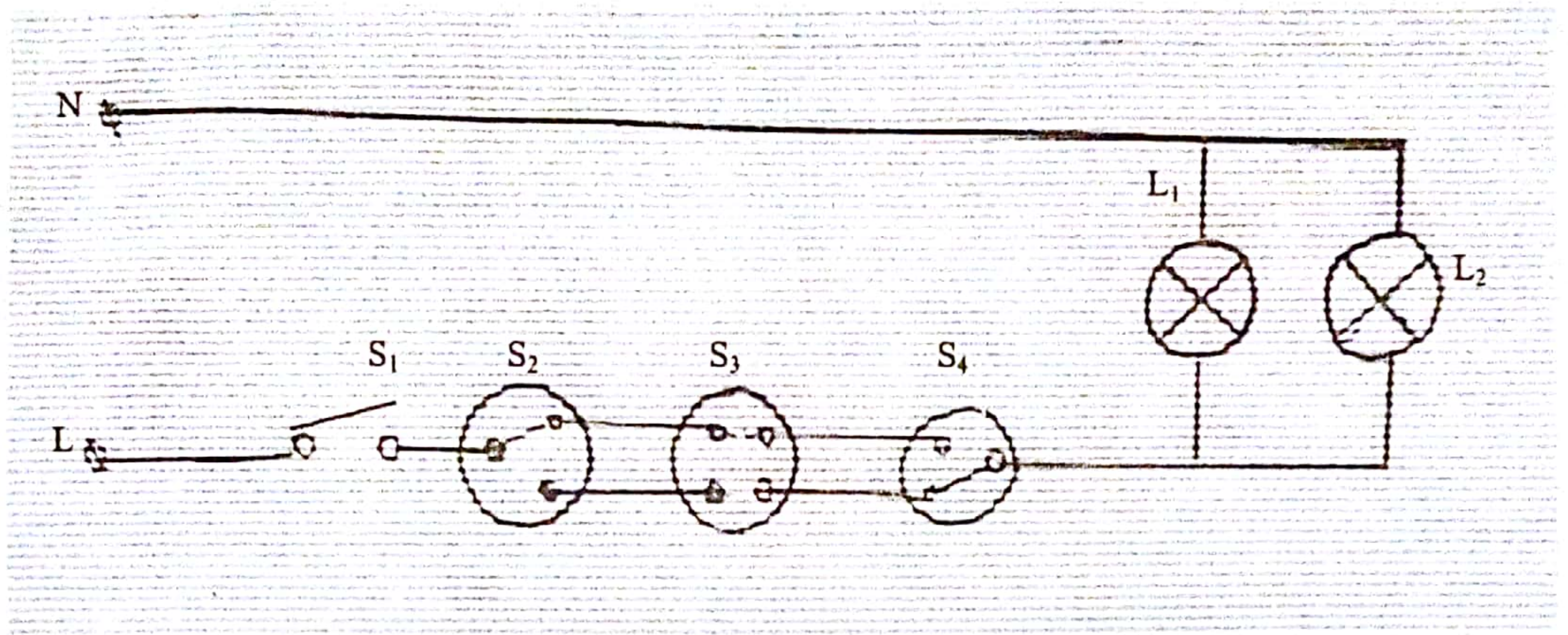


Figure 1

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.

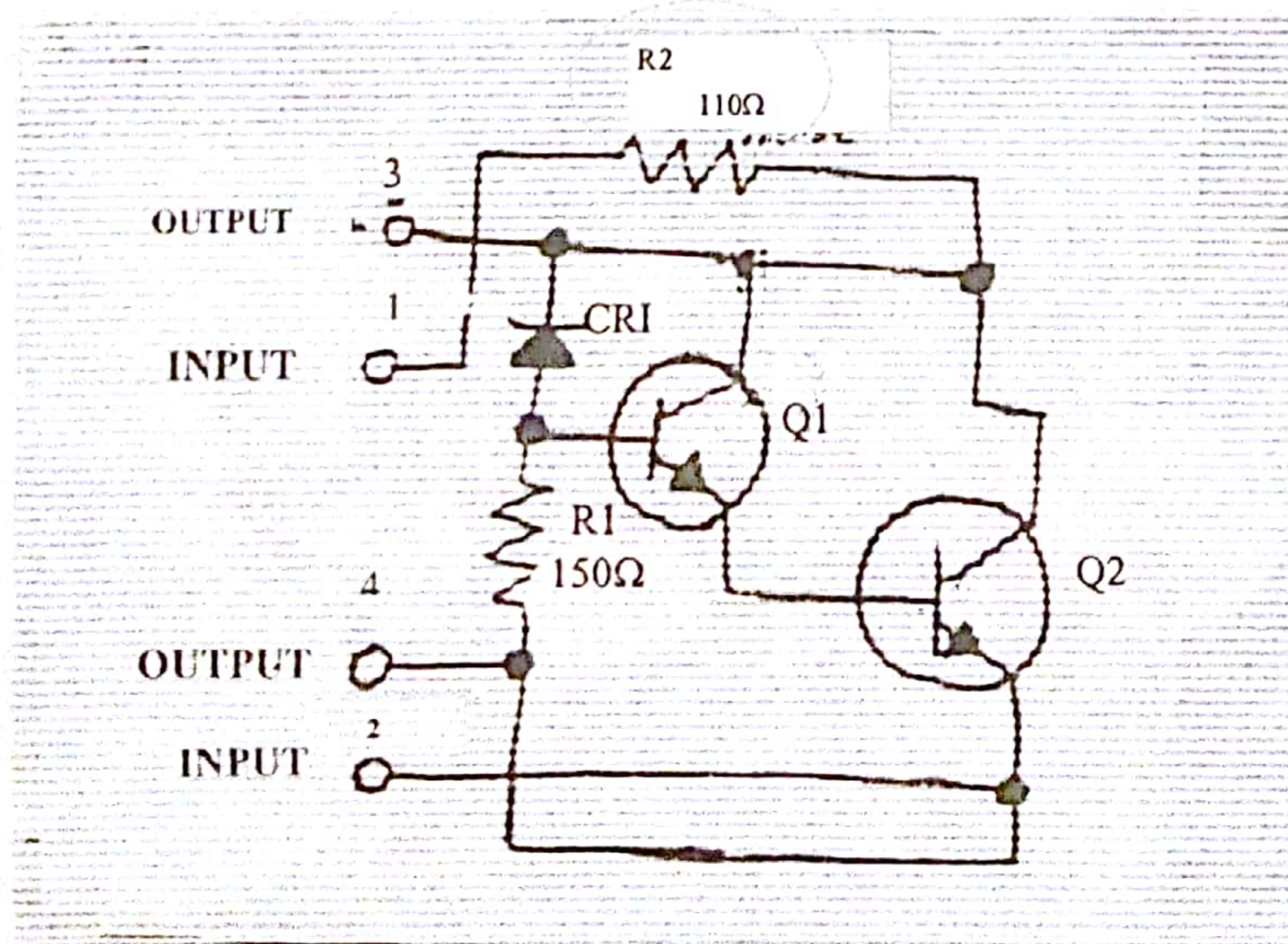


Figure 2