

**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**

**Wednesday afternoon 17/10/2007**

---

**Instructions**

1. This paper consists of **six (6)** questions.
2. Answer question **number 1** and any other **three (3)** questions.
3. Electronic calculators are **not** allowed in the examination room.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

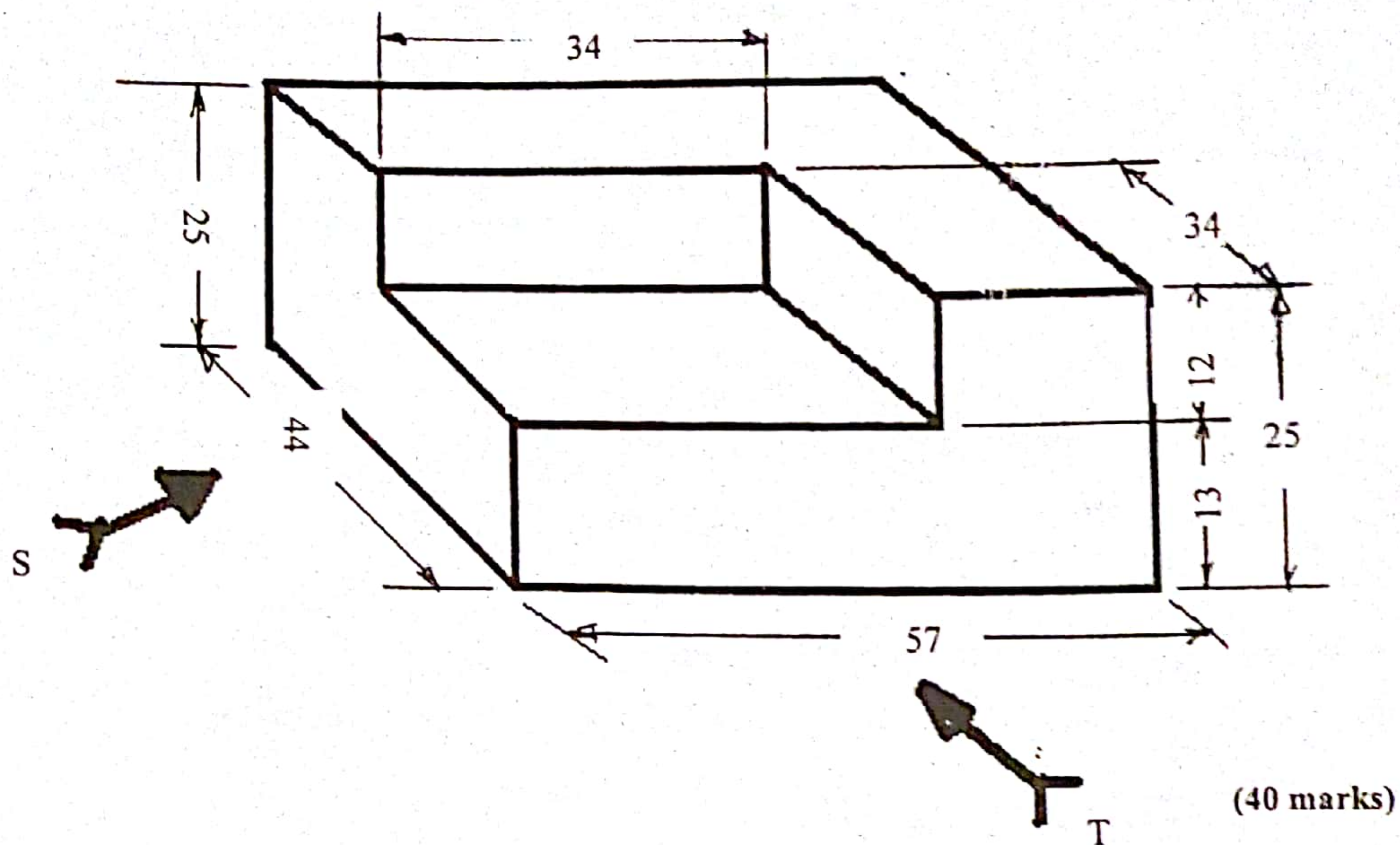
**S4S**

This paper consists of 3 printed pages.



1. Draw full size in third angle orthographic projection the following views of as shown:

- Front elevation in direction of arrow T
- End elevation in direction of arrows S
- Plan view projected from view (a)



(40 marks)

2. Sketch the conventional figures of the following titles:

- Straight knurling
- Diamond knurling
- Square on shaft
- Hole on a circular pitch.

(20 marks)

3. The sketch shown in fig. 1 is an installation diagram of intermediate switching controlling two lighting points. Draw the assembled representation circuit diagram for the systems.

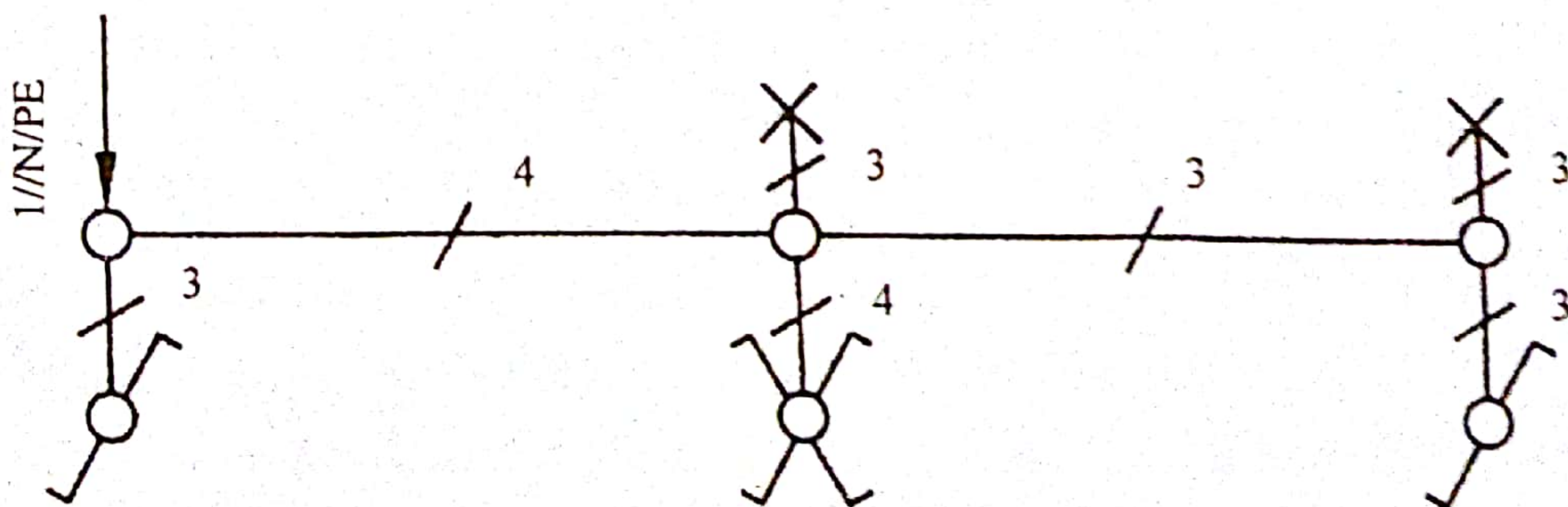


Fig. 1

(20 marks)



4. Draw a simple stable amplifier using the following components:  
1 NPN transistor  
4 Resistors  
3 Capacitors  
Use common emitter transistor configuration. (20 marks)
5. Sketch the symbols of the following accessories:  
(a) Immersion heater with thermostat  
(b) Fixed radiator  
(c) Thermostat  
(d) Filament lamp  
(e) Wall socket outlet. (20 marks)
6. Sketch the symbols of the following components:  
(a) Zener diode  
(b) PNP transistor  
(c) Rectifier  
(d) Thyristor  
(e) Photoelectric cell. (20 marks)