**East West University**

**Lab Report**

**Semester:** Fall-2024

**Course Title:** Electronic Circuits **Course Code:** CSE251 **Sec:** 03

**Expt No**: 07

**Expt Name:** Biasing of a Common-Source Voltage Amplifier

**Group No:** 07

**Submitted by-**

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Id: 2022-3-60-109

**Submitted to-**

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**Date of Performance:** 02-01-2025

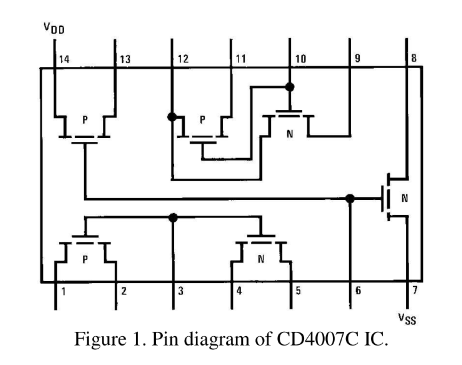
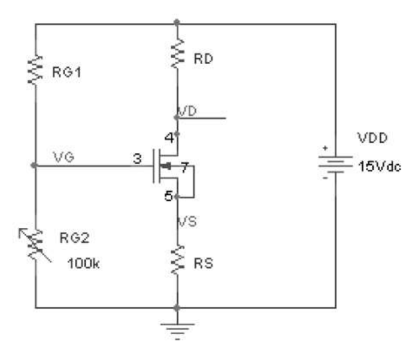
**Date of Submission:** 16-01-2025

**Experiment Name:** Biasing of a Common-Source Voltage Amplifier

**Objectives:**

1. Identify an appropriate DC operation point for a NMOS transistor.

**Circuit Diagram:**

** **

**Equipment and Components Needed:**

* Digital trainer board
* DC power supply
* Digital multimeter
* DC Voltmeter
* CD4007C IC (1 pc)
* Resistor (IKQ I pc)
* Breadboard
* Connecting wires

**Answer to the Lab Questions:**

Measured Resistance,

= 2.15 kΩ

= 97.3 kΩ

= 96.7 kΩ

= 3.28 kΩ

**(i)** For measured value,

= 15V

VGS = 0.74V

VDS = 0.95V

Vt = 1.2 V

For saturation region,

=

=

=

= 0.074mA

**(ii)** For Calculated value,

= 6.26V

VS = 5.52V

VDS = 0.95V

Vt = 1.2 V

= VDS +

*=* (0.95 + 5.52) V

= 6.47 V

VGS = VS

= (6.6 – 5.52) V

= 1.1 V

For saturation region,

=

=

=

=

= 3.5 10-3 mA

**Discussion:**

**A close-up of a letter

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