Electronic Devices & Circuits (CSE251)

Submission by: **Tahmid Iqbal**
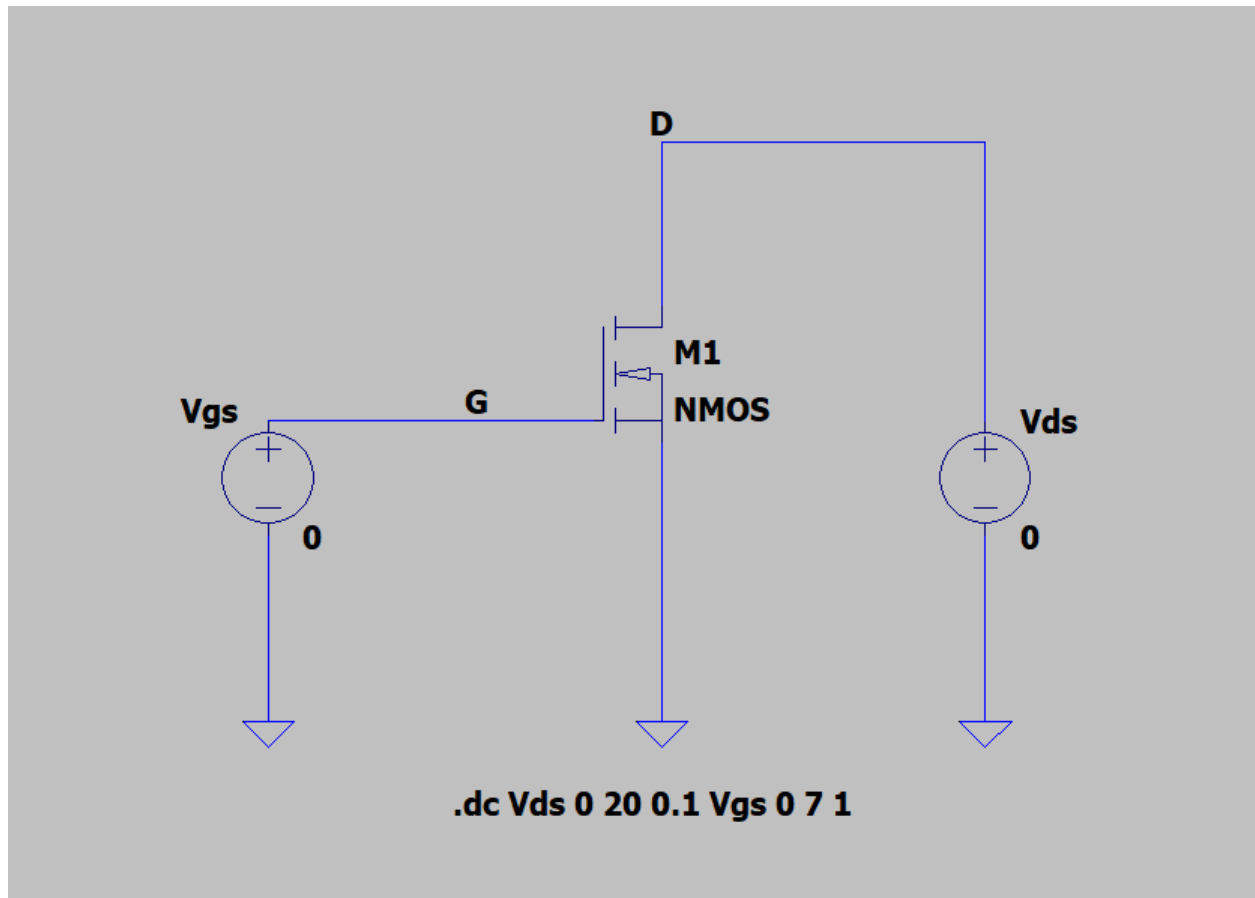Student ID: **21201701**
Section: 06
Submission Date: 30.10.23

Group no: 04
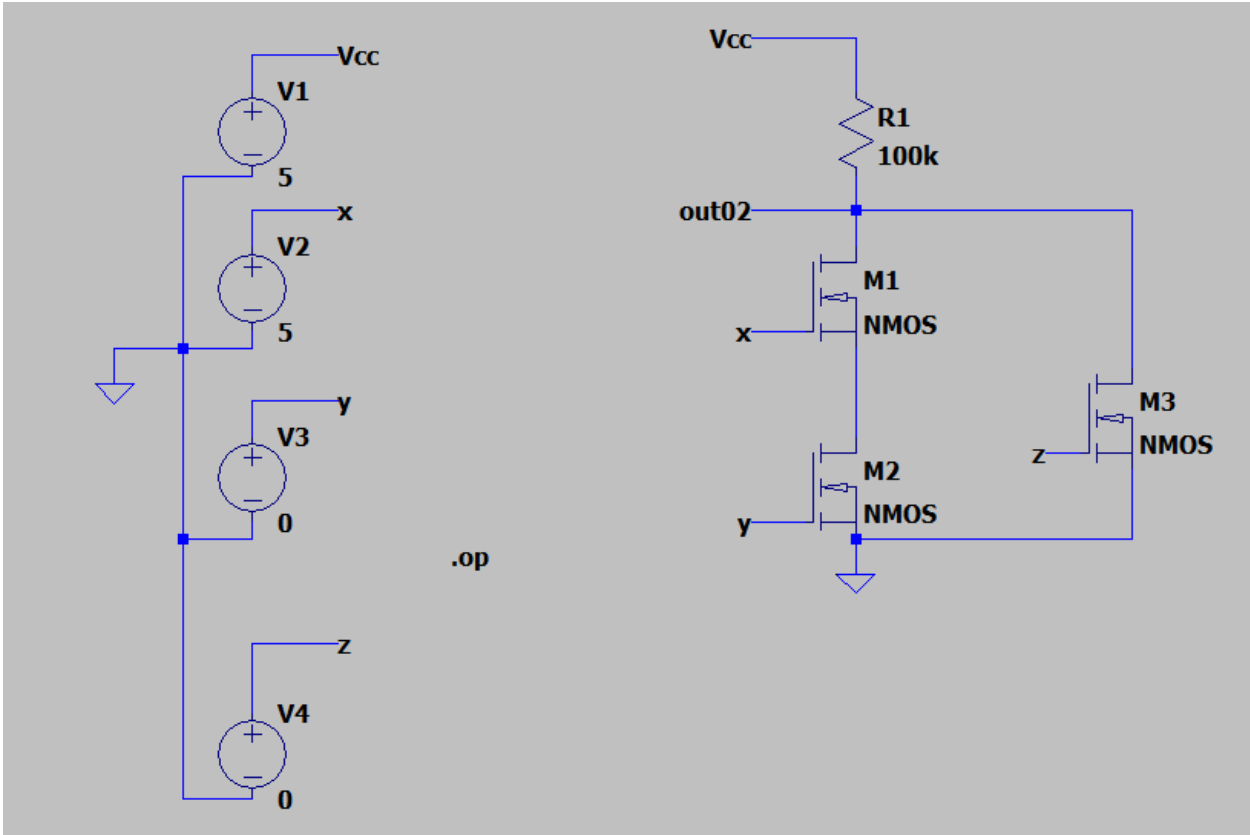
ClassWork

Task01

Data Table 1: Verification of the Truth Tables of Logic Gate and Logic Function

1. NAND Gate

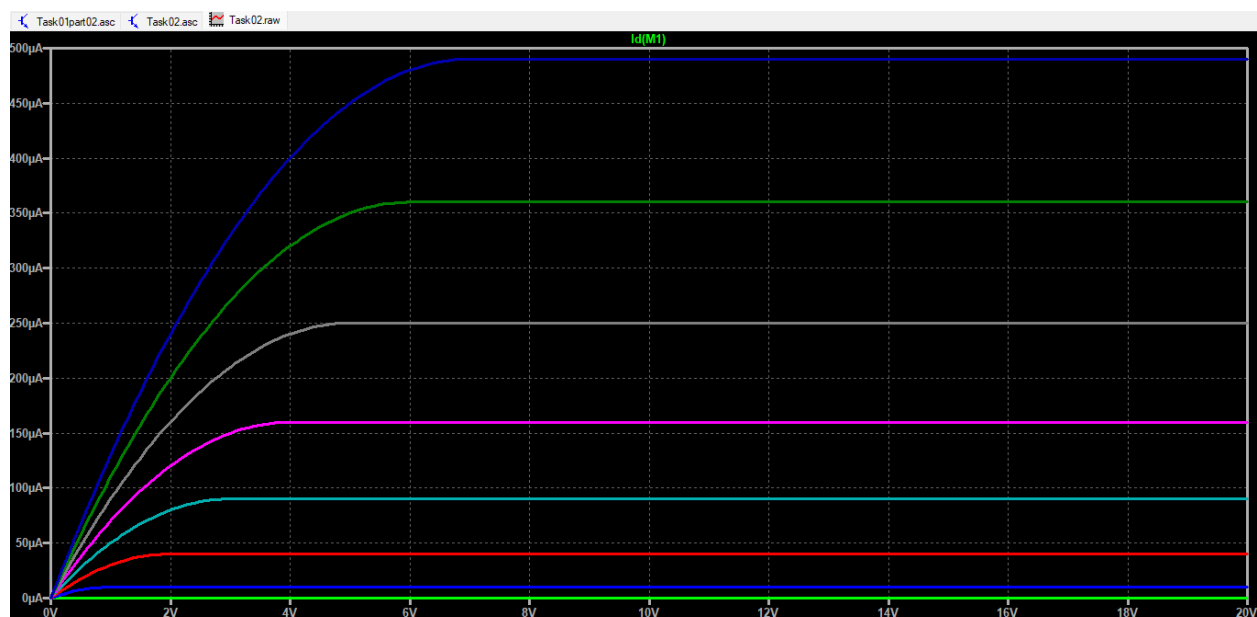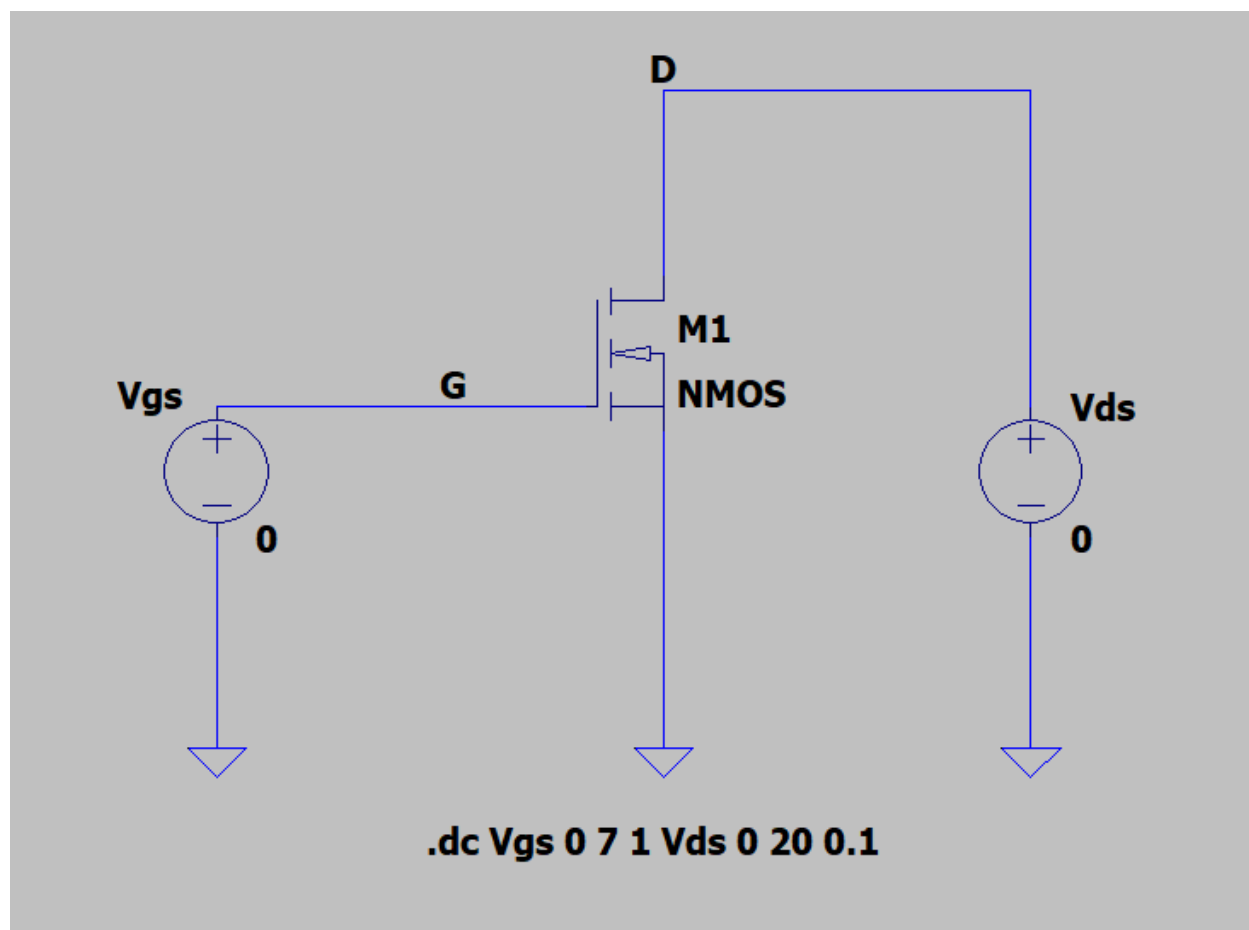| Input Voltage, V_x (volt)	Input Voltage, V_y (volt)	V(output) (volt)	Boolean Output (0 or 1)
0V	0V	5	1
0V	5V	5	1
5V	0V	5	1
5V	5V	0.90098	0

Task01Part02

2. Logic Function, f = $\overline{x\overline{y} + z}$

Input Voltage, V_x (volt)	Input Voltage, V_y (volt)	Input Voltage, V_z (volt)	V(output) (volt)	Boolean Output (0 or 1)
0V	0V	0V	5	1
0V	0V	5V	0.475062	0
0V	5V	0V	5	1
0V	5V	5V	0.475062	0
5V	0V	0V	5	1
5V	0V	5V	0.475062	0
5V	5V	0V	0.90098	0
5V	5V	5V	0.322235	0

Task02

.dc Vgs 0 7 1 Vds 0 20 0.1

Task03

.dc Vce 0 2 0.01 Vbb 0 5 1