



Mansoura University
Faculty of Engineering
System and computer Dept.

1st year
Basic Electronics
9-June-2012

Second -Term Exam.

Answer the following Questions

Q.1 For the BJT Common-Base and Common-Collector Configurations, Derive an expression for the following parameters:

- Input impedance Z_i
- Output impedance Z_o
- Voltage gain A_v
- Current gain A_i

Q.2 For the FET Common-Source configuration, Derive an expression for the following parameters:

- Input impedance Z_i
- Output impedance Z_o
- Voltage gain A_v

Q.3. Derive an expression for output voltage for the following circuits:

- inverting operational amplifier.
- non-inverting operational amplifier.
- operational amplifier as integrator and differentiator.
- operational amplifier as adder and subtractor.

With my best wishes
Dr. Marwa Ismaeel Obayya