Mansoura university
Faculty of Engineering
Dept. of Elctr. and Comm.
1st year

2-6-2013
Time: 3 hours
Course title: Basic Electronics

الامتحان ورقتان

ANSWER ALL QUESTIONS

Question One:

1- Determine Vo for the circuits shown in Fig.1. (20 Marks)

Question Two:

2- Determine the range of values of Vi that will maintain the zener diode in Fig.2 in the ON state. (15 Marks)

Question three:

3- Prove that the voltage divider bias of BJT is the best one, using the current stability factor (10 Marks)

Question Four

4- Design a BJT voltage divider bias amplifier if $V_{CC}=10v$, $R_E=1k\Omega$, $R_2=20k\ \Omega$, $I_C= 2mA$, $V_{CE}=10v$. (15 Marks)

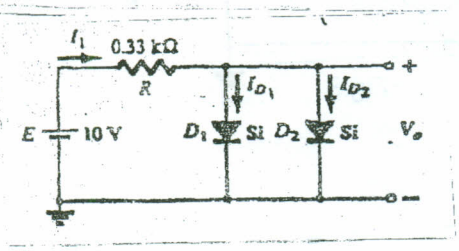
Question Five

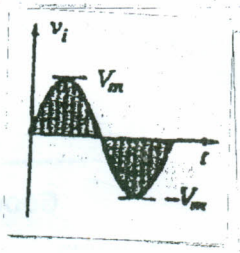
5-a- Draw and Explain the n-channel enhancement MOSFET (10 Marks)

5-b-Explain How CMOS can be used as inverter. (10 Marks)

Question Six

6- Determine VD , Vc for the circuit shown in Fig.3. (20 Marks)





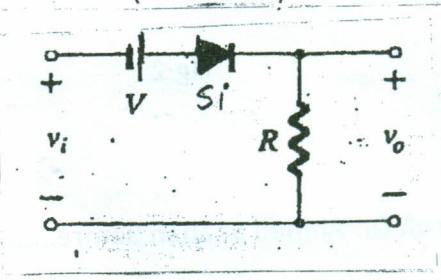
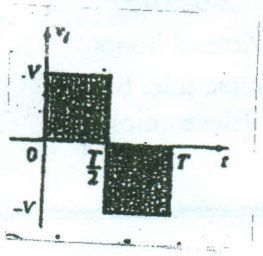
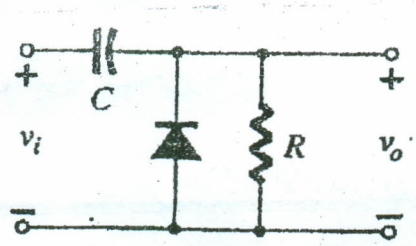
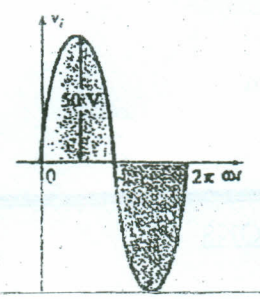
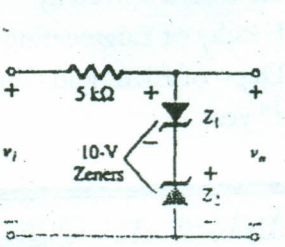


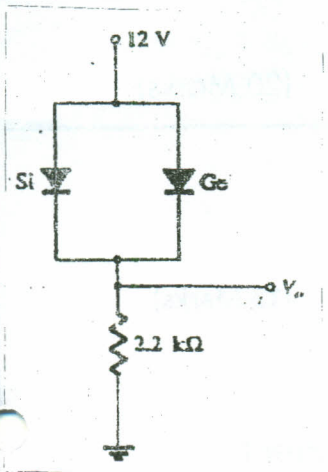
Fig.1

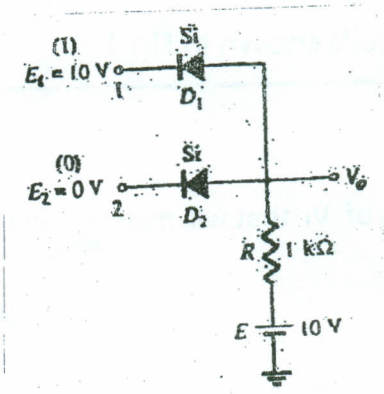


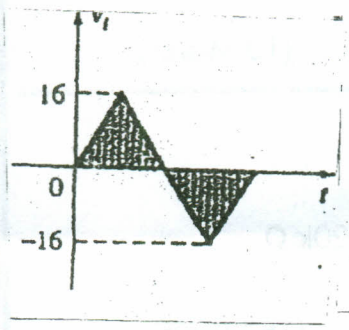












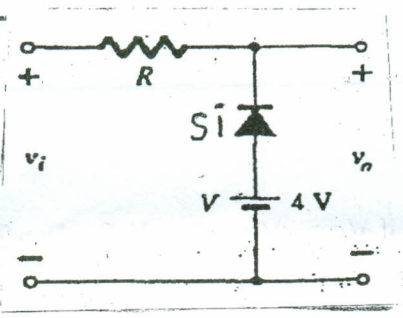


Fig.1

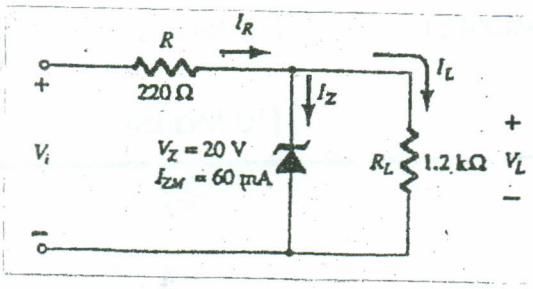


Fig.2

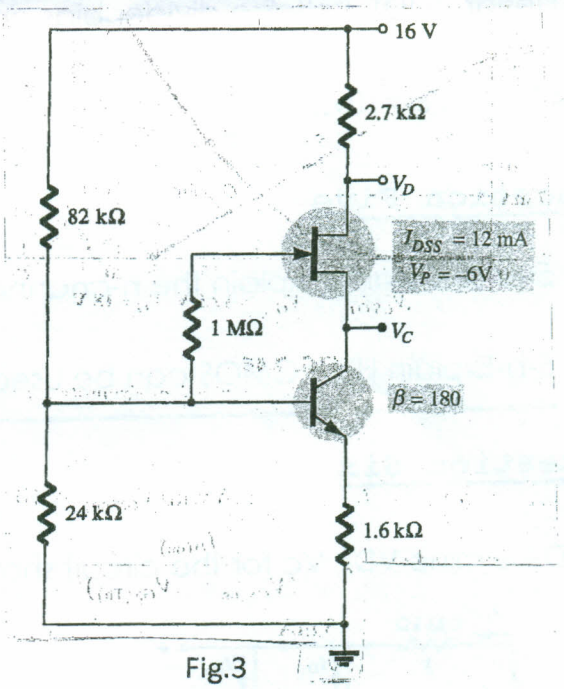


Fig.3

Good luck

Prof. Dr. Ahmed Shaban Samra.....