 

**Electronic Constructions**

**Mid Term Evaluation**

**II Term 2015-2016**

**1) Wire resistor (14p)**

a) Sketch and explain how a wire resistor is built (5p)

b) How do you identify a wire resistor? (2p)

c) List three characteristics of a precision wire resistor (3p)

d) Sketch and explain the derating curve for a high power wire resistor (4p)

**2) Med loss capacitor (11p)**

a) Sketch and explain the fabrication process of a paper capacitor (5p)

b) It uses a rigid or flexible dielectric model? (2p)

c) Which material does it use as conductor? (2p)

d) If Chlorodifenil is used as isolator material, a med loss polar AC capacitor is obtained. Name two applications for this device (2p)

**3) Transformer (8p)**

a) Sketch and explain how a typical transformer works (5p)

b) List three advantages of using electrical steel core in a high power transformer (3p)

**4) Electromechanical Devices (17p)**

a) List five different types of relays (5p)

b) List three pros and two cons of solid state relays vs electromechanical relays (5p)

e) Why choose a contactor instead of a relay? (2p)

d) Define a switch and list its classification (5p)

**5) Bonus (6p)**

List and detail three applications of solenoids in electromechanical device