

# King Fahd University of Petroleum and Minerals

## University Diploma Programs Electronic Equipment Maintenance EET-029: Introduction to Communications

### Home Work # 3

1. When the modulation percentage is 75, an AM transmitter produces 10 kW. How much of this is carrier power? What would be the percentage power saving if the carrier and one of the sidebands were suppressed before transmission took place?
2. A 360-W carrier is simultaneously modulated by two audio waves with modulation percentages of 55 and 65, respectively. What is the total sideband power radiated?
3. When a broadcast AM transmitter is 50 percent modulated, its antenna current is 12 A. What will the current be when the modulation depth is increased to 0.9?