الغرقة الراجة ولا

University

Menoufia

Faculty

: Electronic Engineering

Department

Industrial Electronics and

Control Engineering

Course Name:

Applications of control systems

Date : 03/04/2019 Time : 1 Hours

No. of pages : 1
No. of Questions : 2

Exam

: Midterm Exam

Question No 1: Temperature Measurement

- A) What are the types of temperature sensors that you studied?
- B) What is the principle of operation of each one?
- C) which one is the best to measure the body temperature? And how is can be interfaced with AVR microcontroller.

Question No 2: Gas Measurement

- A) What is the difference between Gas/Smoke & Ethanol Sensors?
- B) Draw the symbole with the terminal numbers of TGS822 sensor, and explain the use of each one with characteristics?
- C) Design the interfacing circuit to convert the sensor output to related variable voltage?

Best Wishes
Dr. Ahmed El-Sherbeny