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## School of Engineering

B.TECH Electronics and Communication Engineering  
Semester End Examination - Nov 2023

Duration : 180 Minutes  
Max Marks : 100

### Sem VII - BEE01T4001 - Sensors and Actuators

General Instructions

*Answer to the specific question asked*

*Draw neat, labelled diagrams wherever necessary*

*Approved data hand books are allowed subject to verification by the Invigilator*

- 1) Explain working of thermal diode K1 (2)
- 2) Explain the parameters controlling sensitivity of Bimetallic Strip K2 (4)
- 3) A probe may read 100 ohms at 0°C, but at 100°C, the .00385 probe will read 138.5 ohms and the .00392 probe will read 139.20 ohms. Illustrate the above statement. K2 (6)
- 4) How to Use Photoresistors to Detect Light on an Arduino? K3 (9)
- 5) Explain use of pilot tube and its important parameters K3 (9)
- 6) Describe the criteria of a sensor to be used in remote diagonize system K5 (10)
- 7) Explain the working principle of cantilever beam and its sensitivity factors as pressure sensor. K4 (12)
- 8) What are the features of a smart sensor? Describe the role of smart sensors in biomedical industries. K5 (15)
- 9) Explain the characterstics and working principle of Hydraulic actuator. K5 (15)
- 10) Elaborate the fabrication steps of MOS Capacitor. K6 (18)