

Question Bank

Class: Final Year (Electrical & Instrumentation Engineering)

Subject: Sensors & Actuators (Subject Code: BTEIE0802G)

SENSORS AND ACTUATORS QUESTIONS

Q.1 Explain transducer with its types?

Q.2 What is metal-oxide semiconductor field-effect transistor (MOSFET)? what are MOSFET used in?

Q.3 What is physical vapour deposition (PVD)? what is their application?

Q.4 What is a Gas Sensor? Write their Advantages, Disadvantages and Applications?

Q.5 What is a Piezoelectric Actuator : Working & Its Applications?

Q.6 What are the static and dynamic characteristics of the sensor?

Q.7 What is Calibration of sensor?

Q.8 What is a Strain Gauge and How Does it Work?

Q.9 What is E-Beam Evaporation?

Q.10 Explain Pulsed Laser Deposition (PLD)?

Q.11 Explain Sputter deposition with their uses?

Q.12 What is an Actuator and their Applications?

Q.13 Explain microfluidics device bonding techniques?

Q.14 Explain chemical vapour deposition with their types?

Q.15 Why use PDMS for microfluidic device fabrication?

Q.16 Explain Hybrid physical chemical vapour deposition?

Q.17 Explain construction, types and application of gas sensor?

Q.18 Explain design and fabrication process of microsensors?

Q.19 Describe to assist photomask design using Clewin software?

Q.20 Explain static and dynamic characteristic?

Q.21 Describe calibration of sensor based electronics system?

- Q.22 List various gas sensor ? Explain piezoelectric gas sensor?**
- Q.23 Explain Nano-structured based gas sensor?**
- Q.24 Explain Thermal deposition?**
- Q.25 Write application in MNOSFET and its variants?**
- Q.26 Explain field effect transistor?**
- Q.27 Differentiate piezoelectric and piezoresistive actuators?**
- Q.28 Explain pulse laser Deposition?**
- Q.29 Describe device bonding technique?**
- Q.30 Give the parameters of sensors and actuators?**
- Q.31 Explain Optimization and characterization of various sensors using COMSOL Multiphysics?**
- Q.32 Explain photolithography for patterning layer?**
- Q.33 Describe micropumps and micro actuators with practical application?**
- Q.34 Explain pressure sensor?**
- Q.35 Explain E-beam evaporation techniques of Physical vapour deposition?**
- Q.36 Explain PECVD & MOCVD?**
- Q.37 Explain pattern transfer techniques in detail?**
- Q.38 Explain polymer gas sensor?**
- Q.39 Describe in detail Optical gas sensor?**
- Q.40 What is uhvcvd(chemical vapour deposition)?**

