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School of Engineering**B.TECH Mechanical Engineering
Mid Term Examination - May 2024****Duration : 90 Minutes
Max Marks : 50****Sem IV - G2UA403T - Sensors and transducers**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) Compare accuracy and precision in terms of measurement. K2 (2)
- 2) What is gauge factor in sensors? K1 (3)
- 3) Explain the principle of operation and an application of a proximity sensor. K2 (4)
- 4) Classify the various types of magnetic sensors and explain their functions. K2 (6)
- 5) Identify the features and applications of parallel plate, serrated plate/teeth type and cylindrical type . K3 (6)
- 6) Identify and explain the principle of working of Acoustic and Potentiometric sensors. K3 (9)
- 7) Categorize Resistance change type: RTD materials with respect to the functions of measurement and requirements. K4 (8)
- 8) Explain the function of "Magnetostriction" in magnetic sensors. What is the motive of coils in Structure of a fluxgate sensor? K4 (12)

OR

Compare Magnetic- and induction-based displacement and force sensors. What is the function of Displacement sensors based on variable self-inductance? K4 (12)