

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2025)

CLASS: BTECH
BRANCH: BT

SEMESTER : II/IV
SESSION : SP/2025

SUBJECT: EC259 SENSORS & TRANSDUCERS

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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| Q.1(a) | Define the Sensors with suitable examples. | [2] | 1 1 |
| Q.1(b) | Explain the difference between Sensors and Transducers. | [3] | 1 1 |
| Q.2(a) | Explain the principal operation of sensors. | [2] | 2 1 |
| Q.2(b) | Demonstrate the characteristics of Sensors. | [3] | 2 1 |
| Q.3(a) | Illustrate the errors in measurement. | [2] | 2 2 |
| Q.3(b) | Define the resistive transducers with suitable examples. | [3] | 2 2 |
| Q.4(a) | Define the potentiometer with suitable diagram. | [2] | 3 2 |
| Q.4(b) | Explain the Metal & Semiconductor strain gauge. | [3] | 3 2 |
| Q.5(a) | Explain the LVDT and RVDT. | [2] | 2 2 |
| Q.5(b) | Explain the signal conditioning circuit. | [3] | 3 2 |

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