



# AJEENKYA

## D Y PATIL UNIVERSITY

### End Term Examinations (April 2019)

**School:** School of Engineering

**Program:** B.Tech Biomedical Engineering

**Course:** Biomedical Sensors and Transducers

**Course Code:** BME203

**Semester:** IV

**Max Marks:** 40

**Duration (mins):** 120

**Note: 1. Figures to the right indicates full marks.**

**Q 1 is compulsory.**

**Q 1. Write short note on:**

**[2x5=10]**

- (a) Photoelectric transducer
- (b) Optical fiber sensor
- (c) RTD
- (d) Displacement transducer
- (e) Optical pyrometry

**Answer any THREE (Q 2 – Q 6) questions.**

- Q 2.** Explain in detail different electrical properties of glass electrode **[10]**
- Q 3.** State and explain working of ultrasonic flow transducer. **[10]**
- Q 4.** How to measure the partial pressure of CO<sub>2</sub> and O<sub>2</sub> in human blood? **[10]**
- Q 5.** Short notes on: **[5x2=10]**
- (a) ISFET
  - (b) Blood P<sup>H</sup> measurement
- Q 6.** What is Biosensor? Explain different components and type of biosensor with example. **[10]**