Government College of Engineering, Amravati
Department of Electronics

Course Code: ETU302
Course Name: CDIT

CT-I

Time: 1 hr
Marks: 15

Attempt any **THREE**

Q.1 Suggest the DC bridge used for the measurement of low resistance without causing the effect of contact resistance and prove that how the effect of contact resistance eliminated? 05

Q.2 Define transducer with classification. Enlist and Explain the different parameter required for selection of electrical transducer. 05

Q.3 How stray capacitances affecting bridge measurement and how to eliminate its effect? 05

Q.4 Explain Hay's Bridge. Find the value of series inductance (Lx) and resistance (Rx) in network for $R_2=10k\Omega$, $R_1=2k\Omega$, $C_1=1\mu F$, $R_3=1k\Omega$ and $\omega=3000$ rad/sec. 05

$L_x = \frac{C_1 R_2 R_3}{1+\omega^2 R_1^2 R_1^2}$ $\quad R_x = \omega^2 R_1^2 R_2^2$

$R_x \cdot R_1 = R_2 \cdot R_3$.

$\frac{R_1}{\quad} = \frac{R_3}{\quad}$ $\quad R_x = \frac{R_2 R_3}{R_1}$