N. B.
(1) Question No. **1** is **compulsory**.
(2) **Attempt** any **three** questions out of remaining questions.
(3) **Figures** to the **right** indicate **full** marks.
(4) **Assume** suitable **data** if **necessary**.

1.		Solve any **five** :-	20
	a)	Draw the bridge used for measurement of low resistance.	
	b)	Give comparison between digital and analog instruments.	
	c)	Explain basic working of double frequency meter	
	d)	Draw the potentiometer used for measuring unknown emf?	
	e)	Give classification of Transducers with examples of each type	
	f)	Short note on – resolution and sensitivity of digital meters	
2.	a)	Explain Moving iron repulsion type meter and derive the torque equation	10
	b)	Explain the Maxwell's Bridge. Compare it with bridge Hay's	10
3.	a)	A PMMC galvanometer with full scale deflection of 50 mA and coil resistance of 50Ω is to be converted into a multimeter to measure voltage (0-10V) and current (0-5A). Find the suitable values of shunt and multiplier resistance required.	10
	b)	Explain the construction and working of capacitive pressure transducer	10
4.	a)	Explain with neat sketch transducers used for temperature measurement. Give comparison.	10
	b)	Explain types of error that occur during measurement and means to reduce/avoid them.	10
5.	a)	Explain instrument transformers and their applications	10
	b)	Explain duel slope type volt meter	10
6.		Write a short note on-	
	a)	Measurement of current using potentiometer	07
	b)	High resistance measurement	07
	c)	Digital energy meter	06