

## CURRENT ELECTRICITY

## Test Paper-II

MAX MARKS: 30

TIME: 90Mts

Sl. No.	QUESTION	ANSWER PAGE	MARKS
1	The resistance of the platinum wire of a platinum resistance thermometer at the ice point is $5\Omega$ and at steam point is $5.23\Omega$ when the thermometer is inserted in a hot bath, the resistance of the platinum wire is $5.795\Omega$ . Calculate the temperature of the bath.	Page:105	2
2	Find the effective resistance when resistances are connected in series	Page:107	2
3	Find the effective resistance when resistances are connected in parallel.	Page:107	2
4	Explain why a transformer is required to lower the voltage to a value suitable for use at a station?	Page:107	2
5	Derive the expression to find the power dissipated when current $I$ is allowed to flow through a conductor?	Page:106	2
6	What is an emf of a cell? Derive an expression to find the current flowing in a circuit in which a resistor $R$ is connected across a cell of emf $\epsilon$ .	Page:110	3
7	Derive an expression to find the effective emf of cells in series	Page:113	2
8	Derive an expression to find the effective emf of cells in parallel	Page:114	2
9	State Kirchhoff's rules.	Page:116	2
10	What is a Wheatstone Bridge? What is the advantage of it?	Page:118	1
11	What is a Meter Bridge? Explain with a neat circuit diagram how a meter bridge can be used to determine the unknown resistance of the given wire.	Page:120	3
12	In a meter bridge, the null point is found at a distance of 33.7 cm from one end of the meter bridge. If now a resistance of $12\Omega$ is connected in parallel with $S$ , the null point occurs at 51.9 cm. Determine the values of $R$ and $S$ .	Page:121	2
13	Give the principle of working of a potentiometer. Explain with a neat circuit diagram how potentiometer can be used to compare the emf of two primary cells.	Page:122	3
14	Explain with a neat circuit diagram how potentiometer can be used to find the internal resistance of a cell.	Page:122	2