



# LIST OF IMPORTANT SCIENTIFIC INSTRUMENTS

For All Government Exams

Current Affairs and General Awareness section is one of the most important and high scoring sections of any competitive exam. Therefore, we regularly provide you with Free Static GK E-book for your preparation. In this section, questions related to Scientific Instruments and their uses are frequently asked. Hence it becomes very important for all the candidates to be aware about all the important **Scientific Instruments and their uses.** 

In all the competitive exams, every mark counts and even 1 mark can be the difference between success and failure. Therefore, to help you get these important marks we have created a Free Static GK E-book on the List of Scientific Instruments and their Uses.

The comprehensive list of all the Important Scientific Instruments along with their Uses is given in a tabular format in the following pages of this Free Static GK E-book on Scientific Instruments and their Uses.

#### **Sample Questions -**

- Q. "Chronometer" is used to?
- (a) Determine longitude of a vessel at sea
- (b) Measure heat Radiation
- (c) Converts mechanical energy into electrical energy
- (d) None of the above

Answer: Option A – Determine longitude of a vessel at sea

- Q. "Pyrometer" is used to measure-
- (a) Heart Beat
- (b) Water Pressure
- (c) Very High Temperature
- (d) Speed of Light

Answer: Option C - Very High Temperature





Instruments	Usage
Altimeter	Measures altitude (Used in Aircraft)
Ammeter	Measures strength of electric current
A in a inc a inc a face	Measures force and velocity of Wind
Anemometer	and directions.
Audiometer	Measures Intensity of Sound
Barograph	Continuous recording of atmospheric
Darograph	pressure
Barometer	Measures atmospheric pressure
Binoculars	To view distant objects
Bolometer	To measure heat Radiation
Callipers	Measures inner and outer diameter of
Campers	bodies
Calorimeter	Measures quantities of heat
1	Used for charging air with petrol
Carburettor	vapours in an internal combustion
	engine.
Cardiogram	Traces movement of heat; recorded
Cardiograffi	on a Cardiogram (ECG )
Cardiogram (ECG)	Traces movements of the heart
Cardiogram (LCG)	recorded on a Cardiograph
Cathetometer	Determines heights, measurement of
Cathetometer	levels, etc. In scientific experiments
Chronometer	Determine longitude of a vessel at sea
Cinematograph	Used for projecting pictures on the
Ciriematograph	screen.
Colorimeter	Compares Intensity of colours
Commutator	To change / reverse the direction of
	electric current. Also used to convert
	AC into DC
Crescograph	Used for measuring growth in plants.



Cryometer  It is a type of thermometer used to measure very low temperatures usually close to Zero degree C  A charged particle accelerator which can accelerate charged particles to high energies  Dilatometer  Measures changes in volume of substances  Converts mechanical energy into electrical energy  Dynamo  Dynamo  Dynamo  Measures electrical power  Electro Encephalon  Electrometer  It measures very small but potential difference in electric currents  It is used to obtain a magnifying view of very small objects capable of magnifying up to 20,000 times  Electron microscope  Electroscope  Detects presence of an electric charge Endoscope  To examine internal parts of the body Fathometer  Measures he relative density of liquids		
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Hydrometer Measures the relative density of	Galvanometer	Measures electric current
Hydrometer	Gramophone	Used to reproducing recorded sound.
liquids	Hydrometer	Measures the relative density of
		liquids
Hydrophone Measures sound under water	Hydrophone	· ·



Hygrometer	Measures level of humidity
Hygroscope	Shows the changes in atmospheric
	humidity
Hypsometer	To determine boiling point of liquids
	Graphically records physiological
Kymograph	movement (e.g., Blood Pressure /
p.	Heartbeat)
Lactometer	Measures the relative density of milk
Mach motor	It determines the speed of an aircraft
Mach meter	in terms of the speed of sound
Magnetometer	It is used to compare magnetic
	movements of magnets and fields.
Manometer	Measures the pressure of gases
Micrometre	It measures distances / angles.
Microphono	Converts sound waves into electrical
Microphone	vibrations
Microscopo	To obtain a magnified view of small
Microscope	objects
Nanhalamatar	Measures the scattering of light by
Nephelometer	particles suspended in a liquid
	An instrument attached to the wheel
Odometer	of a vehicle, to measure the distance
	travelled.
Ohmmeter	To measure electrical resistance in
Ommittee	ohms
Ondometer	Measures the frequency of
	electromagnetic waves, especially in
	the radio- frequency band.
Optometer	Used for testing the refractive power
	of the eye.



Otoscope	Used for visual examination of the eardrum.
Periscope	To view objects above sea level (used in submarines)
Phonograph	Used for reproducing sound.
Photometer	Compares the luminous intensity of the source of light.
	Instrument that simultaneously
	records changes in physiological
Polygraph	processes such as heartbeat, blood-
	pressure and respiration; used as a lie
	detector.
Dysnamator	It determines the density and
Pycnometer	coefficient of expansion of liquids.
1.	Measures direct beam solar
	irradiance. Sunlight enters the
Durhaliamatar	instrument through a window and is
Pyrheliometer	directed onto a thermopile which
	converts heat to an electrical signal
	that can be recorded.
Pyrometer	Measure very high temperature.
Quadrant	Measures altitude and angles in
Quadrant	navigation and astronomy.
	It is used to detect the direction and
Radar	ranges of an approaching aeroplane
Nauai	by means of radio wave, (Radio,
	Angle, Detection, and ranges ).
Radio Micrometre	Measures heat radiation
Rain Gauge	Measures Rainfall.
Refractometer	Measure refractive indices.
Salinometer	Determines the salinity of solutions



	It is used by navigators to find the
	latitude of a place by measuring the
Sextant	elevation above the horizon of the
Sextant	sun or another star; also used to
	measure the height of very distant
	objects.
Caiana a ana ah	Used for recording the intensity and
Seismograph	origin of earthquakes shocks.
	Spectroscope equipped with
Coostronostor	calibrated scale to measure the
Spectrometer	position of spectral lines
	(Measurement of refractive indices ).
Spectroscope	To observe or record spectra.
Chandamatar	An instrument used for measuring
Speedometer	speed of the vehicle.
Sphoromotor	Measures curvature of spherical
Spherometer	objects.
Sphygmomanometer	Measures blood pressure.
Sphygmometer	Measures Pulse Beat
Stereoscope	To view two- dimensional pictures.
Stathassana	It is used by doctors to hear and
Stethoscope	analyse heart and lung sounds.
Stroboscope	To view rapidly moving objects.
Tacheometer	A theodolite adapted to measure,
	elevations and bearings during survey
Tachometer	It is used to determine speed,
	especially the rotational speed of a
	shaft (used in aeroplane and motor-
	boats ).
Tangent	It measures the strength of direct
Galvanometer	current



Telemeter	Records physical happening at a
	distant place
Teleprinter	Receives and sends typed messages
	from one place to another
Telescope	To view distant objects in space
Thermometer	It measures temperature
Thermostat	It regulates the temperature at a
	particular point
Tonometer	To measure the pitch of a sound
	An apparatus used for converting high
Transformer	voltage to low and vice-versa without
	change in its frequency.
Transponder	It is used to receive a signal and
Transponder	transmit a reply immediately
Udo meter	Rain gauge
	To measure and use ultrasonic sound
Liltracanacana	(beyond hearing); use to make a
Ultrosonoscope	ecogram to detect brain tumours,
	heart defects and abnormal growth
Vemier	Measures small sub-division of scale
Venturi meter	To measure the rate of flow of liquids
Vernier	Measures Small sub-division of scale.
Viscometer	Measures the viscosity of liquids
Voltmeter	To measure electric power potential
	difference between two points
Wattmeter	To measure the power of electric
	current
Wave meter	To measure the wavelength of a radio wave



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OICL AO NICL AO NIACL AO RAILWAYS RRB LIC HFL UIIC Assistant

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