

## **Scientific Instruments**

| <b>S. No</b> | <b>Instrument</b> | <b>Use</b>   |
|--------------|-------------------|--|
| 1.           | Altimeter         | Measures altitudes (used in aircraft)  |
| 2.           | Ammeter           | Measures strength of electric current  |
| 3.           | Anemometer        | Measures force and velocity of wind and directions                                     |
| 4.           | Audiometer        | Measures intensity of sound  |
| 5.           | Barograph         | Continuous recording of atmospheric pressure   |
| 6.           | Barometer         | Measures atmospheric pressure  |
| 7.           | Binoculars        | To view distant objects  |
| 8.           | Bolometer         | To measure heat radiation  |
| 9.           | Callipers         | Measure inner and outer diameters of bodies  |
| 10.          | Calorimeter       | Measures quantities of heat  |
| 11.          | Cardiogram (ECG)  | Traces movements of the heart; recorded on a Cardiograph                               |
| 12.          | Cathetometer      | Determines heights, measurement of levels, etc., in scientific experiments             |
| 13.          | Chronometer       | Determines longitude of a vessel at sea.   |
| 14.          | Colorimeter       | Compares intensity of colours  |
| 15.          | Commutator        | To change/reverse the direction of electric current; Also used to convert AC into DC   |
| 16.          | Cryometer         | A type of thermometer used to measure very low temperatures, usually close to 0°C      |
| 17.          | Cyclotron         | A charged particle accelerator which can accelerate charged particles to high energies |
| 18.          | Dilatometer       | Measures changes in volume of substances   |
| 19.          | Dyanamo           | To convert mechanical energy into electrical energy                                    |
| 20.          | Dynamometer       | Measures electrical power  |
| 21.          | Electronecephalo  | Records and interprets the electrical waves of the brain.                              |
| 22.          | graph (EEC)       | (waves) recorded on electroence-phalograms   |
| 23.          | Electrometer      | Measures very small but potential difference in electric currents                      |
| 24.          | Electroscope      | Detects presence of an electric charge   |

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| <b>25.</b> | Electromicroscope | To obtain a magnifying view of very small objects<br>Capable of magnifying up to 20,000 times  |
| <b>26.</b> | Endoscope         | To examine internal parts of the body  |
| <b>27.</b> | Fathometer        | Measures depth of the ocean  |
| <b>28.</b> | Fluxmeter         | Measures magnetic flux   |
| <b>29.</b> | Galvanometer      | Measures electric current  |
| <b>30.</b> | Hydrometer        | Measures the relative density of liquids   |
| <b>31.</b> | Hygrometer        | Measures level of humidity   |
| <b>32.</b> | Hydrophone        | Measures sound under water   |
| <b>33.</b> | Hygroscope        | Shows the changes in atmospheric humidity  |
| <b>34.</b> | Hypsometer        | To determine boiling point of liquids  |
| <b>35.</b> | Kymograph         | Graphically records physiological movement, (e.g.,<br>blood pressure / heartbeat)  |
| <b>36.</b> | Lactometer        | Measures the relative density of milk to determine<br>purity   |
| <b>37.</b> | Machmeter         | Determines the speed of an aircraft in terms of the<br>speed of sound  |
| <b>38.</b> | Magnetometer      | Compares magnetic movements and fields   |
| <b>39.</b> | Manometer         | Measures the pressure of gases   |
| <b>40.</b> | Micrometer        | Converts sound waves into electrical vibrations  |
| <b>41.</b> | Microphone        | Measures distances/angles  |
| <b>42.</b> | Microscope        | To obtain a magnified view of small objects  |
| <b>43.</b> | Nephetometer      | Measures the scattering of light by particles<br>suspended in a liquid   |
| <b>44.</b> | Ohmmeter          | To measure electrical resistance in ohms   |
| <b>45.</b> | Ondometer         | Measures the frequency of electromagnetic waves,<br>especially in the radio-frequency band   |
| <b>46.</b> | Periscope         | To view objects above sea level (used in<br>submarines)  |
| <b>47.</b> | Photometer        | Compares the luminous intensity of the source of<br>light  |
| <b>48.</b> | Polygraph         | Instrument that simultaneously records changes in<br>physiological processes such as heartbeat, blood-<br>pressure and respiration; used as a lie detector |
| <b>49.</b> | Pyknometer        | Determines the density and coefficient of<br>expansion of liquids  |

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| <b>50.</b> | Pyrheliometer    | Measures components of solar radiation   |
| <b>51.</b> | Pyrometer        | Measures Very high temperature   |
| <b>52.</b> | Quadrant         | Measures altitudes and angles in navigation and astronomy  |
| <b>53.</b> | Radar            | To detect the direction and range of an approaching aeroplane by means of radiowaves, (Radio, Angle, Detection and Range)  |
| <b>54.</b> | Radio micrometer | Measures heat radiation  |
| <b>55.</b> | Refractometer    | Measures refractive indices  |
| <b>56.</b> | Salinometer      | Determines salinity of solutions   |
| <b>57.</b> | Sextant          | Used by navigators to find the latitude of a place by measuring the elevation above the horizon of the sun or another star; also used to measure the height of very distant objects. |
| <b>58.</b> | Spectroscope     | To observe or record spectra   |
| <b>59.</b> | Spectrometer     | Spectroscope equipped with calibrated scale to measure the position of spectral lines (Measurement of refractive indices)  |
| <b>60.</b> | Spherometer      | Measures curvature of spherical objects  |
| <b>61.</b> | Sphygmometer     | Measures blood pressure  |
| <b>62.</b> | Stereoscope      | To view two-dimensional pictures   |