Specifications and make of the instruments used in the present work.

1. Belt brake dynamometer
   - Maximum load: 23 kg
   - Dynamo meter constant: 3536
   - Radius of the drum: 20 cm
   - Belt thickness: 0.5 mm

2. Stop watch
   - Make: ROCAR, Swiss made
   - Range: 0-15 min
   - Least count: 0.10 sec.

3. Air flow meter
   - Type: Surge tank with a vertical manometer.
   - Orifice diameter: 15 mm
   - Orifice meter constant: 0.6
   - Pipe diameter: 32 mm
   - Manometer range: 0-36 cm
   - Manometer fluid: Water

4. Thermo couple
   - Type: Chromel-Alumel
   - Temperature range: 0°C-1300°C
5. Milli voltmeter
Type: IS 1248 - 68.
Make: Automatic Electric Co. Ltd, Bombay, India.
Range: 0 to 30 milli volts

6. Fuel flow measuring burette
Range: 0-50 cc with a L.C of 0.1 cc

7. Lubricant flow measuring burette
Range: 0-50 cc with a L.C of 0.1 cc

8. Barometer
Type: Fortin.
Pressure range: 65-82 cms of Hg

9. Automotive Emission Analyser
Type: MEXA - 324 GB.
Make: HORIBA, Japan
Range: 0-15% Vol. of CO
0 - 15000 PPM equivalent of N-Hexane for UBHC.

10. Engine indicating system
Type: E 32 MK - II
Make: Tequipment, England
Transducer sensitivity: 11.61.

11. Oscilloscope
Type: CS 1021.
Make: Kenwood Corporation, Japan