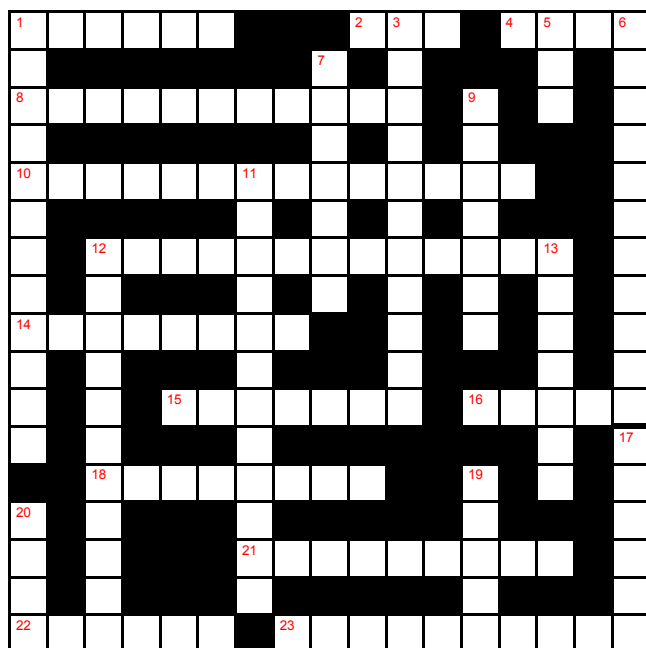


# Thermodynamics\_17x17\_2008-10-21

B.B. Huria



## Across

- 1 \_\_\_\_ law of thermodynamics states inter alia that every process that occurs in nature is irreversible and unidirectional. (6)
- 2 A unit of energy equal to the work done by a power of 1000 watts operating for one hour. (3)
- 4 A form of energy that is transferred by a difference in temperature. (4)
- 8 A stable situation in which forces cancel one another. (11)
- 10 It is the difference between enthalpy and the product of pressure and volume. (8,6)
- 12 The destructive distillation of coal (as in coke ovens). (13)
- 14 A hard natural coal that burns slowly and gives intense heat. (4,4)
- 15 Rotary engine in which the kinetic energy of a moving fluid is converted into mechanical energy by causing a bladed rotor to rotate. (7)
- 16 \_\_\_\_ law of thermodynamics relates to the law of conservation of energy. (5)
- 18 German physicist who formally established the equivalence of heat and work (first law of thermodynamics). (8)
- 21 Process of expansion occurring without loss or gain of heat. (9)
- 22 The capacity of a physical system to do work. (6)
- 23 With unchanging entropy; at constant entropy. (10)

## Down

- 1 Ratio of heat required to raise the temperature of a substance by one degree to that required to raise the temperature of an equal mass of water by one degree. (8,4)
- 3 The degree of hotness or coldness of a body or environment. (11)
- 5 A cgs unit of work or energy. (3)
- 6 It is a point where all the three phases exist together. (6,5)
- 7 The temperature of a gas is a measure or a function of average \_\_\_\_ energy of gas molecules. (7)
- 9 A variety of coal having least calorific value. (7)
- 11 The principle that equal volumes of all gases (at same T and P) contain equal numbers of molecules. (9,3)
- 12 A cycle of expansion and compression of an idealized reversible heat engine that does work without loss of heat. (6,5)
- 13 An elementary particle with 0 charge and mass about equal to a proton. (7)
- 17 A decimal unit of measurement of the metric system (based on meters and kilograms and seconds). (6)
- 19 Its specific heat is one. (5)
- 20 Carbon fuel produced by distillation of coal. (4)