- 1 The frequency at which a microwave oven works is (2.45 G Hz). The wavelength of a yellow beam is (600 n m). What is the working wavelength of the microwave oven, divided by c m?
- 2 It takes (500 s) for the light to travel from the sun to earth. The astronomical unit is defined as the distance between the sun and the earth. One parsec is the distance from which the angular distance corresponding to the astronomical unit is one arc-second. What is the ratio of one parsec to one astronomical unit?
- **3** One mole of hydrogen (H<sub>2</sub>) has a volume of (22.4 lit) at the standard temperature and pressure. At that condition, what is the density of hydrogen divided by  $(k g m^{-3})$ ?
- 4 The dimensions of mass, length, and time are denoted by M, L, and T, respectively. The gravitational force between two masses is equal to the gravitational constant G, times the two masses, divided by the square of the distance between the two masses. What is the dimension of the gravitational constant G?
- **5** The plot of temperature in the Fahrenheit scale versus temperature in the Celsius scale is a straight line. 0 degrees Celsius is 32 degrees Fahrenheit, while 100 degrees Celsius is 212 degrees Fahrenheit. There is a number x so that x degrees Celsius is xdegrees Fahrenheit. What is x?

6 Good luck

## English for special purposes

Please write the answers in boxes and return only the answer sheet.

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