

Answer all the questions.

1. Students join fast lane with help from Technology Alliance Wales

Technology Alliance Wales works with schools, colleges and industry to improve the quality of technology in education. Following the successful Welsh Assembly Computer Aided Design (CAD) initiative, Technology Alliance Wales has continued to improve the quality of **CAD** teaching in schools obtaining up-to-date software. Some of the software was put to good use in the F1 Challenge where schools were asked to design a racing car. A number of schools competed at the national finals in the NEC in Birmingham and the winners went on to represent the UK in Malaysia. The leaders of British industry are keen to help promote such engineering initiatives, as the students involved may one day work for them in their **research and development (R&D)** departments, creating innovative products which are so vital to business success.

Adapted from the Western Mail, 18 June 2008

- (a) Outline the advantages of *CAD* to a car manufacturer. [4]
- (b) Explain, with examples, the benefits to a business of investing in research and development (R&D). [6]