



## **Principal Assessor Report 2007**

**Assessment Panel:**

**Technical Education**

**Qualification area**

**Subject(s) and Level(s)  
Included in this report**

**Standard Grade Technological Studies:  
General & Credit**

## **Comments on candidate performance**

### **General comments**

The statistics indicated that both Question Papers were fair, balanced and accessible. The full range of marks was awarded in each question.

The different profile of this year's cohort, shown in the directly graded AT element and in the Centres' estimates, and variations in the degree of accessibility of the exam compared to that of 2006, explains the grade boundary decisions.

### **Areas in which candidates performed well**

#### General Level

Q2 (a): completing a flowchart.

Q3 (a): piping of a pneumatic circuit.

Q4 (b) & (c): energy audits.

#### Credit Level

Q5(b): calculating potential energy.

Q6 (a): description of a pneumatic circuit.

Q7: digital electronics.

Q9: energy.

### **Areas which candidates found demanding**

#### General Level

Q1 (b): Universal Systems Diagram.

Q3 (d): main air and exhaust port symbols.

Q5 (b): wiring of the ICs.

Q6 (e) & (f): crank & slider and determining the length of the stroke.

#### Credit Level

Q1 (b): completing a control diagram.

Q3(c): function of components in an electronic circuit.

Q5(c): calculations involving a chain drive.

Q6 (b): difference between main and pilot air.

Q8(b): identification of the parts of a microcontroller.

## Advice to centres for preparation of future candidates

Centres may wish to address the following areas of poor candidate performance seen in this year's examination:

- The correct use of PBASIC continues to be problematic. Candidates in some Centres repeatedly made similar fundamental errors, for example setting the DDR using *let pins %11110000* etc. In addition, Credit Q8(b) highlighted a lack of depth in knowledge associated with the architecture of a micro controller.
- The Universal System Diagram was consistently poorly attempted with candidates either failing to answer this question or else sketching a system or sub-system diagram for the CD player.
- A number of candidates showed a lack of basic knowledge of mechanical systems and many failed to identify a crank & slider or show an understanding of the term stroke.
- There appear to be gaps in certain candidates' KU of pneumatic systems. Questions requiring an understanding rather than recall of knowledge tended to be poorly answered.
- Candidates should be made aware of the statement in the Arrangements that RNA might require the processing of unfamiliar information. Credit Q5(c) (iii) was one such area where a number of candidates failed to identify the correct formula or else took  $n = \text{rev/min}$  rather than the stated  $\text{rev/s}$ .
- Candidates on the whole might benefit from further guidance on basic examination techniques. A small but significant number appear to be unclear of the differences in response required to prompts such as state, describe or explain.

## Statistical information: update on Courses

Number of resulted entries in 2006	1,902
------------------------------------	-------

Number of resulted entries in 2007	1,771
------------------------------------	-------

## Statistical Information: Performance of candidates

### Distribution of overall awards

Grade 1	27.7%
Grade 2	25.9%
Grade 3	19.4%
Grade 4	15.4%
Grade 5	4.2%
Grade 6	5.4%
Grade 7	0.7%
No award	1.4%

### Grade boundaries for each assessable element in the subject included in the report

Assessable Element	Credit Max Mark	Grade Boundaries		General Max Mark	Grade Boundaries		Foundation Max Mark	Grade Boundaries	
		1	2		3	4		5	6
<b>KU</b>	<b>45</b>	<b>34</b>	<b>25</b>	<b>40</b>	<b>25</b>	<b>17</b>	<b>40</b>	<b>14</b>	<b>n/a</b>
<b>RNA</b>	<b>45</b>	<b>34</b>	<b>27</b>	<b>40</b>	<b>30</b>	<b>24</b>	<b>40</b>	<b>19</b>	<b>n/a</b>