

## Principal Assessor Report 2002

**Assessment Panel:**

**Computing and Information Technology**

**Qualification area**

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

**Computing : Advanced Higher**

## Statistical information: update

<b>Number of entries in 2001</b>	
<b>Pre appeal</b>	98
<b>Post appeal</b>	106

<b>Number of entries in 2002</b>	
<b>Pre appeal</b>	514
<b>Post appeal</b>	

## General comments re entry numbers

- significant rise in numbers (385%) which may be due to the following:-
  - demise of CSYS in 2001
  - centres using the AH course for 6th year pupils, who have not previously completed a higher level course. (No prerequisite to have a pass at higher level as there was previously with higher grade SCE)

## General comments

The mean mark, for both the written paper component and the internal project component was 1 mark less than last year. This may suggest that centres are becoming familiar with the national standard and marking closer to that standard. Evidence from marking across the range of options did not suggest that the cohort was in any way less able.

The average pass rate of 81% was substantially higher than the average Advanced Higher pass rates across all subjects.

The paper was comparable to that of 2001.

## Grade boundaries at C, B and A for each subject area included in the report

Upper A = 83  
Lower A = 70  
B = 60  
C = 51

### General commentary on grade boundaries

#### *Notional percentage cut-offs for each grade*

Question papers and their associated marking schemes are designed to be of the required standard and to meet the assessment specification for the subject/level concerned.

For National courses the examination paper(s) are set in order that a score of approximately 50% of the total marks for all components merits a grade C (based on the grade descriptions for that grade), and similarly a score of 70 % for a grade A. The lowest mark for a grade B is set by the computer software as half way between the C and A grade boundaries.

### Comments on grade boundaries for each subject area

These boundaries are comparable with the boundaries from 2001:-

Identical for both upper and lower A

B was 61 in 2001; C was 52 in 2001.

The decision to lower the grade B and Grade C boundary, was greatly debated at the Pass Mark Meeting. Given that data from 2001 was considerably less than the number of candidates in 2002, (and perhaps not a true reflection of the normal cohort) it was decided to drop the C pass mark from 52 to 51, thus coming closer to the standard expected i.e. a pass mark of 50.

## Comments on candidate performance

### General comments

There were notable high quality responses from a few candidates.

Some candidates had difficulty with extended responses in the larger mark questions (eg 12 mark questions).

Each of the options had questions which sampled some of the material that candidates would have had to complete in their unit assessments. It was noted how few candidates could describe and illustrate a methodology, given that they would have had to complete this in their unit assessment. (SOFTWARE DEVELOPMENT question 2c). The same applied in the other options :-

- name and describe two expert system shells (ARTIFICIAL INTELLIGENCE question 3c)
- describe a sequence of assembly language (COMPUTER SYSTEMS question 7b)
- describe response and request to the response, when receiving Web pages from a remote server (DATA COMMUNICATIONS question 9d)

The majority of candidates answered question 2 as their choice in Software Development, question 4 in Artificial Intelligence and question 8 in Computer Systems. There was no evidence of a particular preference in Data Communications.

Computer Systems was the most popular choice of optional unit.

### Areas of external assessment in which candidates performed well

Candidates performed well in the Knowledge and Understanding questions:-

Question 2a, 3a, 3b, 4a, 4b, 4c, 4d, 6a, 8c, 10d

Artificial Intelligence questions (problem solving) were very well done overall.

### Areas of external assessment in which candidates had difficulty

#### SOFTWARE DEVELOPMENT

Candidates did not perform as well as expected in Software Development.

Candidates did not refer back to the question stem, or relate their responses to the scenario given.

Question 2a - many candidates gained 3 out of the 6 marks for the knowledge part (describing a feasibility study) but failed to relate this to the Time Table system in the scenario.

#### ARTIFICIAL INTELLIGENCE

In Artificial Intelligence, although the problem solving components were well done overall, there were poor responses relating to outcome 2 (Applications of Artificial Intelligence) in describing vision systems and robotics.

#### COMPUTER SYSTEMS

The responses were above average overall. Many candidates failed to relate their answers to Network Support in question 6c.

#### DATA COMMUNICATIONS

Very few candidates demonstrated secure knowledge in aspects of Data Communications.

### **Areas of common misunderstanding**

#### SOFTWARE DEVELOPMENT

question 2di - candidates misinterpreted the validation of the design

#### DATA COMMUNICATIONS

"flexibility" was misinterpreted by many candidates in question10a.

## Recommendations

### Feedback to centres

Questions relating to recall of knowledge were generally well done, but extended responses in problem solving/analytical approach were lacking in the depth required at advanced higher level.

Candidates did not always read instructions carefully. There was evidence of candidates omitting one of the questions in the optional unit. The information on the cover, regarding "Each section must be answered in a separate booklet" was often ignored.

There were poor responses in areas which had been covered in the Unit assessments.

For example:-

#### SOFTWARE DEVELOPMENT

Candidates did not perform as well as expected in Software Development.

Candidates did not refer back to the question stem, or relate their responses to the scenario given.

Question 2a - many candidates gained 3 out of the 6 marks for the knowledge part (describing a feasibility study) but failed to relate this to the Time Table system in the scenario.

Candidates are still not showing evidence that they understand fully, the concept of a methodology, or in applying that methodology to analyse a problem or design a solution. Applying knowledge in the context of the given scenario was also very weak.

Question 2di - candidates misinterpreted the validation of the design

#### ARTIFICIAL INTELLIGENCE

Many candidates could not name two expert systems shells and describe one shell's search techniques, justification facilities and method of knowledge representation. (Question 3e)

Question 4 was well done overall. Very few candidates attempted question 5.

#### COMPUTER SYSTEMS

Some candidates could not describe the purpose of a section of code written in assembly language. They merely restated what was given in the question stem. (Question 6)

Despite the arrangements being clear on the generic features of operating systems, many candidates failed to identify four of these features as detailed on page 43 of the arrangements. (eg memory management, processing modes, input/output, filing system, resource sharing, user interface, applications support, security)

Question 6c - responses did not always relate to network support.

Computer Systems was the most popular choice of optional unit.

#### DATA COMMUNICATIONS

Very few candidates demonstrated secure knowledge in aspects of Data Communications.

Technical detail was often omitted in answers to question 9d, 10b and 11d.