Pearson Edexcel

Examiners' Report
Principal Examiner Feedback

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Pearson Edexcel International Advanced Level In Information and Technology (WIT11) Paper 01

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Introduction - historical context

For those reading this report in future years, 2021 was the second, and hopefully last, year when examinations were disrupted by COVID19.

The June 2021 examinations were cancelled, and students were given teacher-assessed grades. This paper was offered in October for students who were unable to get a teacher-assessed grade or were dissatisfied with that grade.

Very few students opted to sit the October examination. As a result, the entry for this examination is very small. This means that statistical information is likely to be unreliable. Even comments such as 'most candidates got both marks for this question' could be misleading as the candidates who took the paper cannot represent the full range of abilities and experience of a 'normal' entry.

Report format

In light of the very small entry, this report will not try to analyse the responses to each item. Most of the short items, where answers are listed in the mark scheme will be dealt with briefly. Instead, it will concentrate on the longer questions, where some examples and commentary might be useful to those preparing students for future examinations. This report should be read in conjunction with the mark scheme.

Report on individual items

1a(i) is about advantages of using Ethernet over WiFi. The mark scheme lists acceptable answers.
Answers about cost and range were not accepted.

1a(ii) is about advantages of using WiFi over Ethernet. The mark scheme lists acceptable answers.
Answers about cost, range, and absence of cables were not accepted.

1b(i) and (ii) are multiple choice questions and the only correct answers are given in the mark scheme.

1c(i) asks where a laptop's MAC address is held. The mark scheme lists acceptable answers.

1c(ii) asks how MAC addressing can be used to prevent unauthorised mobile devices connecting to a LAN.

The mark scheme lists four marking points and gives examples of how they might be combined. Any coherent description that includes two of the marking points should get the marks.
The marking points may be phrased differently. e.g. 'MAC addresses are unique', might be given as 'every laptop has a different MAC address'.

1d(i) asks for an expression for a calculation that converts between gibibytes and gigabits. No calculation was needed, although a small proportion of candidates tried to do one. None of the attempted calculations were correct.
The marks were for correct placement of items in the expression.

1d(ii) asks why file transfers might not reach the rated speed of the cables in the LAN. The mark scheme lists acceptable answers.
Answers about cable or other hardware damage were not accepted.

1e(i) asks where a hardware firewall would be located in a LAN. The mark scheme lists acceptable answers.

1e(ii) asks where a software firewall would be located in a LAN. The mark scheme lists acceptable answers.

2a(i) asks what is meant by an online community. The mark scheme gives some examples of acceptable answers. The first and second parts of each description might be reversed, and sensible answers might be derived from e.g. the first part of example 1 and the first part of example 3. Essentially, a two mark answer needs to indicate use of the internet and a common interest.

2a(ii) asks how a Biology student, Alex, might benefit from membership of an online community. The mark scheme gives some examples of acceptable answers. The first and second parts of each description might be reversed, and sensible answers might be derived from parts of two examples.
The answer should have some reference to Biology and/or student life.

2b is about ways of monetising the online community. The mark scheme lists acceptable answers.
New methods of monetisation are likely to occur and should be given credit.

2c(i) asks what is meant by personal data. The mark scheme lists three marking points. Any combination could be used for a two mark answer. Examples of personal data such as 'name' should be accepted for the first marking point.

2c(ii) is about ways for a community member to to protect their account. The mark scheme lists acceptable answers.
Other methods may be possible, but they must be ones that an individual could use.

2c(iii) is about ways for a community administrator to protect members' data. The mark scheme lists acceptable answers.
Other methods may be possible, but they must be ones that an administrator could apply to all accounts/members' stored data.

2d is a short essay question about how an online learning environment could help a Biology student, Alex, who is doing fieldwork away from his university.

This is worth six marks.

The indicative content in the mark scheme includes a wide range of possible benefits. Good answers do not need to include all the benefits shown or even one from each category shown.

The level three descriptor requires 'accurate and relevant knowledge, and a balanced and fully developed discussion'. Balance may be satisfied by discussing benefits from two or more areas of the indicative content.
Relevancy can be shown by linking the measures to the context of the university/fieldwork/Biology studies/student life.

3a(i) asks for the purpose of system software. The mark scheme lists acceptable answers. There are many ways of expressing the purpose but essentially the answer must be about allowing control of the hardware.

3a(ii) asks for the purpose of application software. The mark scheme lists acceptable answers. Answers may include examples of tasks such as creating a document, or examples of software such as a browser or word processor.

3b asks how an operating system could manage security in a school network.
The mark scheme lists acceptable answers.
Other methods that could reasonably be used in a school setting would be acceptable.

3c is a short essay question about licensing options for an art package to be used on desktop PCs in a school. Candidates are asked to consider three options.

This is worth six marks.

The indicative content in the mark scheme includes a description of what each license type involves with some benefits and drawbacks of each. Good answers do not need to include all the benefits and drawbacks but should consider each of the three license types.

The level three descriptor requires 'accurate and relevant knowledge, and a balanced and fully developed discussion'. Balance may be satisfied by discussing/comparing the three licence types. Relevancy can be shown by linking the licences to the context of the art package being used in a school.

4a is a short practical question, about an entity relationship diagram.

This is worth six marks.

The mark scheme contains six items.
The last marking point requires a complete diagram with no extra attributes or relationships or incorrect keys. Incorrect relationship types are allowed
The first two items in the mark scheme only require one correct relationship and type.

4b is a short practical question, about a flowchart

This is worth six marks.

The mark scheme contains eight items.
Candidates do not need to produce a fully complete diagram to get full marks. Any six of the eight marking points are sufficient.

This approach was taken as was felt that the candidates have a lot to do in a limited time and different candidates will have different strengths in analysing a problem and producing a flowchart.

The flowchart in the mark scheme drawn to illustrate all the marking points. It is not the only answer.

5 is a long essay question about ta smartphone app that uses location awareness. Candidates are asked to evaluate the technologies that might be used, the sort of information that the app might give to a user, and any moral/ethical issues with the app.

This is worth twelve marks.

The indicative content in the mark scheme includes a range of possible approaches. Good answers do not need to include all of them but must include something about the areas specified in the question A conclusion is also required.

The level three descriptor requires ' accurate and relevant knowledge, a coherent and fully developed response, an awareness of competing arguments, and a conclusion supported by evidence'.

A good answer would probably include something about an appropriate technology such as GPS, plus advantages and disadvantages of having the app, mainly for the user, although the position of the app company/writer could also be considered.

There is no 'correct' conclusion. Similar apps are used in the real world, some are acceptable to their users, while others get poor reviews and may even be removed from app stores due to security/privacy concerns. The conclusion should however agree with the arguments made by the candidate.

6a describes the use of passive RFID tags on toll roads and asks how the system might work. Several candidates seem to have got no further than reading ‘RFID tag’ and then described their use in preventing theft from shops.

The mark scheme lists five marking points. Any coherent combination of three of them would get full marks.

6b is a large practical about a dataflow diagram for the toll system.

This is worth twelve marks.

The mark scheme contains thirteen items and candidates do not need to produce a fully complete diagram to get full marks.

Appendix 7 of the specification shows the correct symbols to use in dataflow diagrams, but these were not repeated in the paper and alternative symbols were accepted as long as they were used consistently.

Processes were also interpreted fairly loosely, as long as the process could be recognised it did not have to be in a single box as shown in appendix 7.

Any layout configuration could be used, as long as the parts/processes could be identified.

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