

[C016/SQP059]

Intermediate 1
Computing Studies
Specimen Question Paper

Time: 1 hour

NATIONAL
QUALIFICATIONS

Fill in these boxes and read what is printed below.

Full name of school or college

Town

First name and initials

Surname

Date of birth

Day Month Year

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Candidate number

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Number of seat

Attempt **all** questions in Section I and the questions from **one** of the other **three** sections.

Read all questions carefully.

Write your answers in the space provided on the question paper.

Write as neatly as possible.

Before leaving the examination room you must give this book to the invigilator. If you do not you may lose all the marks for this paper.

SECTION I

Attempt all questions in this section

1. There is a variety of application packages on the market. From the list below, match the software with its most appropriate use.

numerical processing software, educational software,
text processing software

- (a) Learning a foreign language

1

- (b) Keeping a record of your spending and saving

1

2. A text processing package could be used to write a job application.
Give **one** example of a task that database software could be used for.

1

3. Give **two** features you would expect to find in a graphics package.

2

1

4. A reporter has access to a laptop computer and a desktop computer.
When might she prefer to use:

- (a) the laptop?

1

- (b) the desktop?

1

5. Computers have two types of memory: RAM and ROM. Give **one** difference between these two types of memory.

1

Marks
1
1
1
2
1
1
1
1

6. Text is one type of data that can be stored in a computer. Name **one** other type of data that can be stored.

1

7. One difference between a desktop computer and a laptop computer is that the desktop computer is much larger in size. Give **one** other difference.

1

8. Briefly describe the purpose of communication software.

1

9. All computers have an *operating system*. Give **one** function of an operating system.

1

10. Which of the following could be used to describe a high level programming language?

Tick **two** boxes.

Consists of 0s and 1s

Is designed to solve problems

Is written in a language very like English

Does not have to be translated

2

1

11. State **one** difference between a high level language and machine code.

1

12. Name and describe **one** type of *on-line* assistance available.

2

1

Marks
1
1
1
1
1
2 1

13. A magnetic disc drive is one type of magnetic storage device.

(a) Name **one** other type of magnetic storage device.

(b) Describe **one** difference between the two types of magnetic storage.

14. Bethan uses text processing software to produce her English report.

(a) She decides that the third paragraph should be at the start of the report. Which feature of the software should Bethan use to make the change without re-typing the paragraph?

(b) Bethan has typed “mary” instead of “Mary” throughout her report. Which feature of the software should Bethan use to find and correct this mistake?

(c) Bethan wants to make the heading of her report stand out. State **one** feature she could use.

(d) Bethan is worried that a disc fault will mean that she will have to re-type her report. Her friend tells her to make a backup copy. Describe fully what Bethan should do to make a backup copy of her work.

15. Akmal draws cartoons for the school magazine. He wants to use his computer to create the cartoons.

(a) (i) What type of computer application package would you suggest Akmal should use to create his cartoons on computer?

1

(ii) What input device could he use?

1

(b) Akmal's computer is attached to both a dot matrix printer and a laser printer.

Which printer will give the better quality?

1

(c) Akmal read an article in a computing magazine which mentioned *utilities*.

(i) Name **one** type of computer utility program.

1

(ii) What could the utility program you named in part (i) be used to do?

1

16. Lee works in the office of a car showroom which is part of a national chain of showrooms. The company uses a database package to store information.

(a) The company used to keep the information about customers on record cards.

Give **two** advantages of using a database package rather than record cards.

2

1

16. (continued)

(b) Lee is asked to make a backup of the database every day.

(i) Suggest a suitable backing storage device for making backups.

1

(ii) Give a reason for your choice of device.

1

(c) At present, the sales details from each garage computer are sent by post to head office.

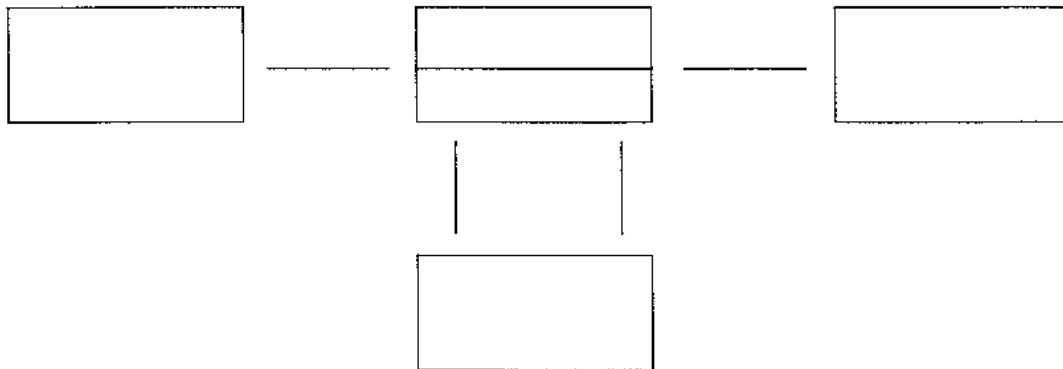
Which type of application package would be needed to allow the electronic transfer of data?

1

17. (a) A block diagram of a computer system is shown below. The 5 blocks are:

Backing Storage *Central Processing Unit* *Input Device*
Output Device *Memory*

Write the names in the correct blocks and draw arrows to show the direction of the flow of data.



6
5
4
3
2
1

[END OF SECTION I]

Complete ONE of the next THREE sections

SECTION II

Information Systems

Marks

1. (a) *Data* is raw facts and figures. What is meant by the term *information*?

1

- (b) Give **one** difference between *data* and *information*.

1

2. Peter has been asked to produce a TOP OF THE POPS chart for the school magazine. He knows that he should use an *information cycle* but he cannot remember the order in which he should carry out each stage. Put the stages in order to allow the chart to be completed accurately.

- format
- communicate
- search
- store
- retrieve
- capture

The first two stages are given for you.

Stage 1 search _____

Stage 2 capture _____

Stage 3 _____

Stage 4 _____

Stage 5 _____

Stage 6 _____

4

3

2

1

3. Johan is the secretary of his local badminton club. Every year he has to write a reminder to every club member that the club fees are due.

- (a) At present a manual system of record keeping is used. Give **two** examples of a manual record system which Johan could use.

2

1

3. (continued)

Marks

- (b) Johan knows that one of the characteristics of information is *accuracy*. He knows what that means but is unsure about the meaning of some of the other characteristics.

To help Johan, match **two** of the following characteristics of information to the meanings listed below.

completeness *legality* *value*

- (i) Worth or importance of the information

1

- (ii) Amount of information; omissions

1

- (c) Johan considers using an automated information system.

- (i) Give **one** example of an automated information system.

1

- (ii) Name and describe **one** advantage of an automated information system.

2

1

- (d) Johan decides to visit another badminton club to look at its record keeping system. The club he visits has a number of computers linked together.

- (i) What is the term used to describe a number of computers linked together?

1

- (ii) Computers linked in this way can share peripherals. Give **one** other benefit of linking computers.

1

3. (continued)

Marks

- (e) Johan installs an automated information system. He can now exchange information with clubs in other towns, using his computer and the telephone line.

Complete the sentences by circling the correct response. Give a reason for your choice.

- (i) Johan's system is connected to a LAN/WAN.

Reason

2
1

- (ii) This type of network is an INTERNAL/EXTERNAL system.

Reason

2
1

- (f) Johan wants to know more about how the history of the sport of badminton developed. Describe how he could use his computer to find this information.

1

[END OF SECTION II]

SECTION III

Software Development

1. The term *software development environment* refers to any environment whose features can be used to produce solutions to problems.

Modularity is one feature of the software development environment. State **two** other features.

Marks

2
1

2. (a) State **two** types of data which are available within a software development environment.

2
1

- (b) Why do software development environments offer a choice of data types?

2
1

3. You have been asked to write a program which will allow pupils, in science, to enter data from their experiments. To make sure that the program you write meets the needs of the user, you have decided to follow the characteristics of the *software development environment*.

Briefly describe each of the software development characteristics.

- (a) User interface

2
1

- (b) Fitness for purpose

2
1

- (c) User guide

2
1

4. Give an example of a control feature and state its use.

2
1

5. Here is a list showing some of the stages in the software development environment.

- implementation
- analysis
- testing
- design

(a) (i) If you are trying to solve a problem by writing a program, which stage would you do first?

1

(ii) Put the remaining stages in order:

Stage 2 _____

Stage 3 _____

Stage 4 _____

3
2
1

(b) The software development environment has six stages. Name the other **two** stages.

2
1

[END OF SECTION III]

SECTION IV

Internet

Marks

1. A number of services are provided by the Internet. From the list below match the service with its most common use.

File Transfer Newsgroups World Wide Web e-mail

(a) Browsing the Internet

1

(b) Writing messages

1

(c) Holding electronic discussions on a particular subject

1

(d) Downloading a free version of a new piece of software

1

2. Give **two** reasons why a student may prefer to send a message by e-mail rather than by post.

2

1

3. *Newuser@goodschool.ac.uk* is an example of an e-mail address.

(a) What is the part of the address after the @ called?

1

(b) What is the purpose of *Newuser* in the address?

1

(c) What does *ac* tell us about the user?

1

(d) What does *uk* tell us about the user?

1

4. The Internet can be used to transfer files. Give the name of a file transfer method.

1

5. A graphics image is to be transferred across the Internet. What file type could be used for the graphics image?

1

6. Complete the following sentences by inserting a set of words in the correct place. Each option should only be used once.

World Wide Web Usenet newsgroup Internet Relay Chat (IRC)

The system used to enable Internet users to talk to each other in real time is called _____ . The service which allows you to

post a message which can be seen by its subscribers is called

_____ . The _____

allows the user to browse through a vast range of interesting information on a variety of subjects.

3
2
1

7. Which Internet service would best suit each of the following activities?

(a) A lawyer sending a copy of a file to another lawyer

1

(b) A teacher wishing to communicate with a teacher in another country

1

(c) A business person wishing to advertise on the Internet

1

8. When using the Internet to access information services, a number of factors can affect the speed of access. Name **two** factors which can affect the speed of access.

2
1

[END OF SECTION IV]

[END OF QUESTION PAPER]

[C016/SQP059]

Intermediate 1
Computing Studies
Specimen Marking Instructions

NATIONAL
QUALIFICATIONS

Intermediate 1

Computing Studies

Comp Apps LO1(a,b)

- 1 (a) educational software

1 mark

- (b) numerical processing software

1 mark

Comp Apps LO1(d)

- 2 a file on computer containing details of a record collection

1 mark for any reasonable example

Comp Apps LO1(b)

- 3 Any reasonable answer i.e. filing facilities (load and save), editing facilities (scale, rotate), drawing tools

1 mark each, maximum 2 marks

Comp Syst LO1(c)

- 4 (a) *1 mark for any reasonable example*

(b) *1 mark for any reasonable example*

- 5 Random Access Memory – volatile, the data is lost when the computer is switched off,
read/write memory
Read Only Memory – non-volatile, data is not lost when the computer is switched off,
cannot easily be written over

1 mark for any difference

Comp Syst LO1(b)

- 6 numerical data
or
graphical data

1 mark

Comp Syst LO1 (c)

- 7 Desktop – mains operated, type of screen, input device used
Laptop – battery operated, type of screen, input device used, portable

1 mark for any reasonable difference, not size

Comp Syst LO2 (c)

- 8 To allow communication between two computers

1 mark for any reasonable answer

Comp Syst LO2 (a)

- 9 file handling, memory management (accept definition of an operating system = a set of programs which control the running of the computer)

1 mark for any reasonable answer

Comp Syst LO2 (b)

- 10 Is designed to solve problems
Is written in a language very like English

1 mark each

Comp Syst LO2 (b)

- 11 HLL are easier to read/write than programs in LLL
HLL are easier to edit than LLL
HLL must be translated
HLL more like English
Portability of HLL

Any reasonable difference 1 mark

Comp Apps LO1 (c)

- 12 On-line help *1 mark* brief description *1 mark*

or

On-line tutorial *1 mark* brief description *1 mark*

Comp Syst LO3 (d)

13 (a) magnetic tape drive

1 mark

(b) speed of access, storage capacity, type of access – serial, sequential

Any reasonable difference 1 mark

Comp Apps LO1 (b)

14 (a) Cut and paste *or* Move (select and drag)

1 mark

(b) Search & Replace, Find & Change

1 mark

(c) Bold, Font, Size, Italics, Colour

1 mark for any reasonable answer

Comp Syst LO3 (c)

(d) idea of copy of original file stored on another medium (floppy disc)

2 marks for a good description

1 mark for an adequate description

Comp Syst LO2 (c)

15 (a) (i) Graphics, name of software package not acceptable

1 mark

(ii) mouse, graphics tablet, keyboard

1 mark for any reasonable device

Comp Syst LO3 (b)

(b) Laser Printer

1 mark

Optional Unit – Information Systems

LO1 9(a)

- 1 (a) information – something which adds to your knowledge (1 mark)
(b) information is in context data is not

Any reasonable example, 1 mark

LO1(c)

- 2 *Search* (given in question)
Capture (given in question)

Format
Store
Retrieve
Communicate

1 mark for each adjacent pair, 4 marks for all correct

LO2 (a,b)

- 3 (a) a written record
record cards
filing cabinet

1 mark each, maximum 2 marks

LO1 (d)

- (b) (i) value
(ii) completeness

1 mark for each correct answer

LO2(a,b)

- (c) (i) CD-ROMs
or
Computer Databases

1 mark

LO2(d)

- (ii) speed of access
speed of retrieval

1 mark for advantage 1 mark for reasonable description

- (d) (i) network

1 mark

- (ii) shared files/shared data/update only once

1 mark for any reasonable answer

- (e) (i) WAN

1 mark, 1 mark for any reasonable reason

- (ii) EXTERNAL

1 mark (answer to e(i) and e(ii) must match)

1 mark for any reasonable answer

- (f) Search using the internet
Use WWW
Browse the Internet
Newsgroups
CD-ROMS

1 mark for any reasonable answer

Optional Unit – Software Development

LO1(a)

- 1 control
data storage

1 mark each

- 2 (a) number data types
text data types

1 mark each

LO1 (b)

- (b) to facilitate the storage of different types of data i.e. text, number,
or
to allow the manipulation of data e.g. numeric calculation

2 marks for good description 1 mark for adequate description

LO1 (d)

- 3 (a) user interface screen layout, visual impact

2 marks for good description 1 mark for adequate description

- (b) fitness for purpose solution does what it is meant to do

2 marks for good description 1 mark for adequate description

- (c) user guide how to start up and use developed software

2 marks for good description 1 mark for adequate description

LO1 (b)

- 4 Within a procedural language the student would be expected to identify

sequence work through in order

or

repetition allows the same things to be carried out more than once

1 mark for the feature, 1 mark for its purpose

LO3(a)

5 (a) (i) analysis

1 mark

(ii) design
implementation
testing

1 mark for each adjacent pair, 3 marks for all correct

(b) producing documentation
evaluating the solution

1 mark each, order not important

Optional Unit – Internet

LO1 (a,b)

- 1 (a) WWW
(b) E-Mail
(c) Newsgroups
(d) File Transfer

1 mark each

LO1(c), LO2(b)

- 2 filter your messages
fast receipt of messages
ease of replying
ease of sending multiple copies
can save a copy of all messages

Any 2 features, 1 mark each

LO2 (a)

- 3 (a) domain
1 mark
(b) identifier, the user's mailbox
1 mark
(c) academic network
1 mark
(d) live in UK

1 mark

LO3(a)

- 4 Any reasonable file transfer method i.e. FTP, RCP, WWW, IRC (using DCC)

1 mark

LO3 (b)

- 5** GIF, JPEG, Binary format
1 mark

LO4 (a)

- 6** IRC Usenet newsgroups WWW

1 mark each, maximum 3 marks

LO5(a,b,c)

- 7** (a) FTP
(b) e-mail
(c) WWW

1 mark each, maximum 3 marks

LO4 (b)

- 8** server-side factors
client-side factors
communication factors

1 mark each, maximum 2 marks

[END OF MARKING INSTRUCTIONS]

