

Revision Sheet

A-Level Computer Science · Unit 13 Data Representation

10 vocabulary items · 38 marks of exam questions (6 questions)

Part 1 · Vocabulary review answer key. Section A wants the exact English spelling.

Question	Answer	Marks
1	random file	1
2	user-defined type	1
3	enumerated type	1
4	composite type	1
5	File organisation	1
6	serial file	1
7	sequential file	1
8	direct access	1
9	floating-point	1
10	rounding errors	1

11(a)	<p>One mark per mark point (Max 2)</p> <ul style="list-style-type: none"> • TYPE Prime • = (2, 3, 5, 7, 11, 13, 17, 19) <p>Example answer TYPE Prime = (2, 3, 5, 7, 11, 13, 17, 19)</p>
11(b)	<p>One mark per mark point (Max 2)</p> <ul style="list-style-type: none"> • TYPE TDayPointer • = ^STRING // ^DayOfWeek <p>Example answer TYPE TDayPointer = ^STRING // ^DayOfWeek</p>

Multiple Choice Answers

Q12: B

Q13: B

14(a)	A (user-defined non-composite) data type with an ordered list of possible values.
14(b)	A user-defined non-composite data type used to reference a memory location .
14(c)	<p>Marks as shown in the square brackets:</p> <p>TYPE Quarter1 = (January, February, March)</p> <p>TYPE Quarter1 = [1] (January, February, March) [1]</p>
14(d)(i)	DECLARE Pet1 : Pet
14(d)(ii)	<p>One mark for each point:</p> <ul style="list-style-type: none"> • Correct assignment of all string data values • Correct assignment of char data value • Correct assignment of integer data value <p>Example answer:</p> <p>Pet1.PetName ← "Tibbles" Pet1.AnimalType ← "Cat" Pet1.PetAge ← 8 Pet1.PetGender ← 'M' Pet1.OwnerName ← "Jasmine Smith"</p>

15(a)	<pre>LibraryBook.Title ← "A Level Computer Science" LibraryBook.Fiction ← FALSE</pre>
15(b)(i)	<pre>DECLARE NumberOfCopies : 1 .. 10</pre>
15(b)(ii)	<pre>DECLARE AccessionNumber : ARRAY[1:NumberOfCopies] OF INTEGER</pre>
15(c)	<p>Any two from</p> <ul style="list-style-type: none"> • A data type constructed by a programmer // not a primitive data type • A data type that references at least one other data type... • ... the data types can be primitive, or user defined <p>One mark for an example</p> <ul style="list-style-type: none"> • Class / object / set

16(a)	<p>One mark for each correct marking point (Max 2)</p> <ul style="list-style-type: none"> • To create a new data type (from existing data types) • To allow data types not available in a programming language to be constructed // To extend the flexibility of the programming language
16(b)(i)	<pre>TYPE SchoolDay = (Monday, Tuesday, Wednesday, Thursday, Friday)</pre>
16(b)(ii)	<pre>TYPE WeekEnd = (Saturday, Sunday)</pre>
16(c)	<p>One mark for each marking point (Max 4)</p> <ul style="list-style-type: none"> • TYPE ClubMeet and ENDTYPE correct • DECLARE FirstName and DECLARE LastName included with correct data types • DECLARE Schoolday included with correct data types from part 2(b)(i) • DECLARE Weekend included with correct data types from part 2(b)(ii) <p>Example answer</p> <pre>TYPE ClubMeet DECLARE FirstName : STRING DECLARE LastName : STRING DECLARE Schoolday : SchoolDay DECLARE Weekend : WeekEnd ENDTYPE</pre>