The questions on this worksheet have been taken from the 2018 OCR GCSE Computer Science Paper 2

6-A-Day – Computer Science GCSE (p2.9-2016)

Q1	A library gives each book a code made from the first three letters of the book title in upper case, followed by the last two digits of the year the book was published. For example, "Poetry from the War", published in 2012 would be given the code POE12. **(ii)** Use pseudocode to write an algorithm that does the following : • Inputs the title and year of a book from the user. • Uses the librarycode function above to work out the book code. • Permanently stores the new book code to the text file bookcodes.txt .... **[6]**
Q2	Functions and procedures are both examples of sub programs. **(i)** Describe **one** difference between a function and a procedure. .... **[2]**
Q3	Describe **two** benefits to a programmer of using sub programs. .... **[4]**

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Q4	The library sorts their books based on the book code. **(i)** Show the steps that a merge sort would take to put the following list of book codes into ascending alphabetical order (from A to Z). POE12 , BAC97 , FLY77 , JAV16 , TAL86 , AND18 , ZAR09 , HOP86 **[4]**
Q5	Explain **one** advantage of a merge sort compared to a bubble sort. **[2]**
Q6	Convert the denary number **132** into an 8 bit binary number. **[2]**