

6-A-Day – Computer Science GCSE (p2.8-2016)

Q1

(i) Describe what is meant by a variable.

.....
.....
.....
..... [2]

Q2

A programmer has written an algorithm to output a series of numbers. The algorithm is shown below:

```
01 for k = 1 to 3
02     for p = 1 to 5
03         print (k + p)
04     next p
05 next k
06 m = 7
07 print m * m
```

(ii) Identify **two** variables that have been used in the algorithm above.

1
2 [2]

Q3

The logic diagram below (Fig. 2) shows a system made up of two connected logic gates.

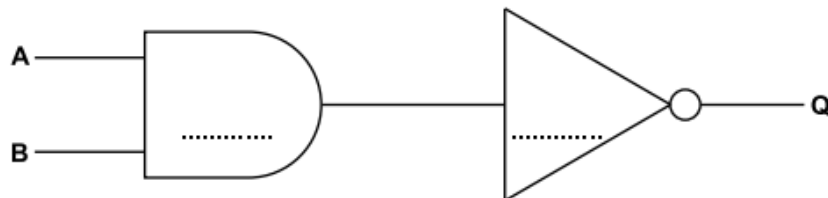


Fig. 2

(a) (i) Label the names of the two gates on the diagram above.

[2]

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

Q4

(ii) Complete the truth table below to show the output from this logic system.

A	B	Q
0	0	
0	1	
1	0	
1	1	

[4]

Q5

(b) Draw the logic diagram represented by $Q = A \vee \neg B$

[2]

Q6

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.

(a) (i) Complete the following pseudocode for a function definition that will take in the book title and year as parameters and return the book code.

```
01 function librarycode(title, .....)  
02     parta = title.substring(0, .....)  
03     partb = year.substring(2, 2)  
04     ..... parta.upper + partb  
05 endfunction
```

[3]