

## 6-A-Day – Computer Science GCSE (15)

Q1	<p>A program contains the following code to calculate the circumference of a bicycle wheel, using the wheel size (diameter).</p> <pre>BEGIN   CONSTANT Pi = 3.14   INPUT WheelSize   Circumference = Pi * WheelSize   OUTPUT Circumference END</pre> <p>(a) The code uses one constant and two variables.</p> <p>(i) State the names of the constant and the variables.</p> <p>Constant: .....</p> <p>Variables: .....</p> <p>[2]</p>
Q2	<p>Explain <b>one</b> difference between a constant and a variable.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>[2]</p>
Q3	<p>Convert the hexadecimal number 6A to binary.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>[2]</p>

Q4

Convert the binary number 00111101 to hexadecimal.

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Q5

A list of file extensions for common file standards used on the internet is shown below.

JPG                  PDF                  MP3                  MPEG                  ZIP

The rock band allows some files to be downloaded by fans.

Complete the table below to show which file format **from the list given above** may be used for each of the following files.

File	File Format
A high resolution image of the band to use as a desktop background.	
Sheet music of their songs ready to be printed in the correct format for guitar players.	
A short video extract from their latest concert tour.	
A compressed collection of 200 plain text files containing the lyrics of all their songs.	
An audio recording of a song from their album.	

[5]

Q6

Explain what is meant by a DBMS.

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