Name:_____ ID:_____ Signature: _____

İSTANBUL TECHNICAL UNIVERSITY
Department of Computer Engineering
BLG103E – Introduction to Information Systems – Fall 2015
Quiz 1 Question & Answer Sheet

QUIZ 1

Duration: 40 minutes.
There are 15 questions.
Rules: - Not open-book. No extra notes or papers are allowed.
- Cellphones must be put away. Calculators are not allowed.

1.

✔Tick all cells for which the item on the left is an example of the category at the top.

Item	Hardware	Software	Operating System	Application	Extension Bus	Secondary Storage	I/O device
GNU/Linux							
Mouse							
Inkscape							
Android							
USB							
Hard Drive							
Geany							

You can tick more than one cell for each item.

2.

I have to write an essay for my Computer Ethics class. I made a plain text file encoded in ASCII. It is a 3000 word long essay. Approximately how big will the file size be?

A 5 kilopixels (5 KP).
B 5 megapixels (5 MP).
C 20 kilobytes (20 KB).
D 20 megabytes (20 MB).
E 10 pixelbytes (10 PB).
F 10 megakilos (10 MK).

Circle one letter.

3.

I then convert the text encoding of my plain-text essay file from ASCII to UTF-8 and save the file. Approximately how will the file size change after this operation? The essay is in English:

A The new file will be a approximately a quarter of the size of the original (¼×)
B The new file will be a approximately half the size of the original (½×)
C The new file will be a approximately the size of the original (1×).
D The new file will be a approximately twice the size of the original (2×).
E The new file will be a approximately four-times the size of the original (4×).

Circle one letter.

Name:_____ ID:_____ Signature: _____

4.

Complete the following table of file types and their properties. The first row is done for you.

MIME Type	Human/Machine Readable?	Typical file extension	Example program	Purpose
application/pdf	Machine	.pdf	Evince, Okular	Portable documents
image/svg+xml		.svg		
text/plain				
text/html				
		.jpg		
		.png		
application/zip				

5.

In the computer world, what can we use **binary** to represent?

- **A** Numbers.
- **B** Text.
- **C** Hexadecimal.
- **D** Images.
- **E** HTML.
- **F** Music.

Circle <u>all</u> that apply.

6.

Use the table on the right to convert the following <u>text</u> to <u>ASCII hexadecimal</u>.

ABBA: _____

Convert the above hexadecimal number to binary:

_____

<u>Partial ASCII table</u>

Character	Hexadecimal
A	0x41
B	0x42
a	0x61
b	0x62

7.

An “absolute path” of a file:

- **A** Expresses the location of the file relative to the root of the file-system.
- **B** Cannot be changed.
- **C** Is a multi-operand conditional expression resulting in True.
- **D** Is a record of your complete history of activity with respect to that file.
- **E** Is an infinite sequence of file nodes that occurs when there are circular references.

Circle one letter.

Name:_____ ID:_____ Signature: _____

8.

Name a way that name-value pairs are used in HTML:_____

Name a way that name-value pairs are used in CSS:_____

9.

Multitasking on modern computers is achieved by:

A Increasing the number of cores per CPU.

B Increasing the number of CPUs.

C Open-source systems.

D Rapidly switching between programs.

E The use of multiple desktops or windows.

Circle one letter.

10.

For each of the below kinds of image, would it, in principle, be better represented in a computer by a raster or vector image?

Photograph from a digital camera: _____

Cartoon/comic designed for publishing on the web: _____

Cartoon/comic acquired by a scanner: _____

Chart output by a spreadsheet: _____

Output of a 3D modelling program with much texture, shadows and detail: _____

Write either RASTER or VECTOR in the spaces provided.

11.

Name one technique for *lossless compression* of any kind of data: _____

Name one technique for *lossless compression* designed for images: _____

Name one technique for *lossy compression* designed for images: _____

Name:_____ ID:_____ Signature: _____

12.

Name or describe the colour (in English or Turkish) from the following hexadecimal numbers representing 24-bit RGB colours:

`0xFF0000:` _____ `0x0000FF:` _____ `0xAAAAAA:` _____

`0x333333:` _____ `0xFFFF00:` _____ `0xFFFFFF:` _____

13.

For each of the following concepts, write if it is a concept found associated with vector images or raster images:

Pixels: _____ Paths: _____

Control Points: _____ Resolution: _____

Write either VECTOR or RASTER in the spaces provided.

14.

Rewrite and correct the syntax of the following HTML elements below each element:

```
<a href="http://google.com" A link to google />
```

_____

```
<p A paragraph of text /p>
```

_____

```
<div>A division of text</div class="myclass">
```

_____

15.

For each of the concepts, name a language or application from which it comes:

Selectors: _____ Style properties: _____

Tags: _____ Elements: _____

Formulas: _____ Absolute addressing: _____