CSC 1100 – Problem Solving and Programming Homework 1 – Trevor Trusty 25 points – Due January 17, 11am

1) [4 points] Using information from the Internet or a textbook, list four trends in the future of computing. Include your sources in the form of hyperlinks or book citations.

#	Trend	Source
1	Larger scale implementation of conversational/voice Artificial	https://www.forbes.com/sites/forbestechcouncil/2016/12/27/upcoming-technology-10-trends-to-watch-in-the-next-five-years/#7ec27eab2fd1
	Intelligence for tasks at home, work, etc.	
2	Because of all of the services most of us use that contribute to machine learning, by 2020 AI will no longer need us to "aid its learning"	https://appinventiv.com/blog/10-tech-trends-that-will-become-mainstream-by-2020
3	The 5 th gen. of cellular network technology will appear by 2020 with improvements over today's 4g connection, such as the latency and speed.	https://appinventiv.com/blog/10-tech-trends-that-will-become-mainstream-by-2020
4	WEB 3.0, technology where our data would be directly readable by the computer.	https://hackernoon.com/future-technology-trends-that-gonna-rule-the-planet-fa2f578f22eb

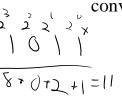
2) [5 points] Using information from a smartphone vendor (like Apple, Samsung, LG, ZTE, etc.), choose one of their products and list specifications for the following features.

Source (hyperlink): https://www.samsung.com/us/mobile/phones/galaxy-
note/galaxy-note9-128gbunlockedsm-n960uzkaxaa/

Vendor: Samsung	
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Feature	Specification
CPU	2.8 GHz,1.7 GHz
Memory size	6GB RAM
Storage medium and size	128GB (ROM), and microSD support up to 512GB
Operating system	Android 8.1
Price	\$999.99

3) [10 points] Convert the following numbers. Show your work for each conversion.



a) Binary 1011 to decimal

-32/16 (O O O) -

b) Binary 110001 to decimal

c) Decimal 55 to binary

d) Decimal 115 to binary

4) [4 points] Using the UNICODE charts available at unicode-table.com/en/, list the characters and corresponding UNICODE numbers of the name of your

favorite town or city. List one character and UNICODE number per row in the following table.

#	Character	UNICODE number (U+HHHH)
1	C	U+0043
2	Н	U+0068
3	I	U+0069
4	C	U+0063
5	A	U+0061
6	G	U+0067
7	0	U+006F

5) [2 points] How many bits would you need to represent 32 different values? Show your calculation.

Bits: _____5