

# Exam #1 Review

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CS-E1- Fall 2011

# Agenda

- + Course notes & Exam #1 details.
- + ASCII & Binary/ base conversion review.
- + PC Hardware Visualization.
- + Sample questions.
- + Q&A (feel free to raise your hand and ask a question at any point throughout the review).

# Course Notes

- + Homework assignment #3 is due by noon of Monday, October 24<sup>th</sup> 2011.
- + Exam #1 will be held on Tuesday, October 18<sup>th</sup> 2011 in Harvard Hall 201.
- + *Closed-book*, so no notes, textbooks, computers, tablets, smart phones, etc.

# Exam #1

- + The 2006 Exam #1 is available for practice, as well as the answer key.
- + It will last **exactly** *2 hour (120 minutes)*.
- + Content will include material from *Lectures 1 - 4* including computer hardware, binary, the Internet, networking, etc.

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**“I’m not procrastinating. I’m proactively delaying the implementation of the energy-intensive phase of the project until the enthusiasm factor is at its maximum effectiveness.”**

Dec	Hx	Oct	Char	Dec	Hx	Oct	Html	Chr	Dec	Hx	Oct	Html	Chr	Dec	Hx	Oct	Html	Chr
0	0	000	NUL (null)	32	20	040	&#32;	Space	64	40	100	&#64;	@	96	60	140	&#96;	`
1	1	001	SOH (start of heading)	33	21	041	&#33;	!	65	41	101	&#65;	A	97	61	141	&#97;	a
2	2	002	STX (start of text)	34	22	042	&#34;	"	66	42	102	&#66;	B	98	62	142	&#98;	b
3	3	003	ETX (end of text)	35	23	043	&#35;	#	67	43	103	&#67;	C	99	63	143	&#99;	c
4	4	004	EOT (end of transmission)	36	24	044	&#36;	\$	68	44	104	&#68;	D	100	64	144	&#100;	d
5	5	005	ENQ (enquiry)	37	25	045	&#37;	%	69	45	105	&#69;	E	101	65	145	&#101;	e
6	6	006	ACK (acknowledge)	38	26	046	&#38;	&	70	46	106	&#70;	F	102	66	146	&#102;	f
7	7	007	BEL (bell)	39	27	047	&#39;	'	71	47	107	&#71;	G	103	67	147	&#103;	g
8	8	010	BS (backspace)	40	28	050	&#40;	(	72	48	110	&#72;	H	104	68	150	&#104;	h
9	9	011	TAB (horizontal tab)	41	29	051	&#41;	)	73	49	111	&#73;	I	105	69	151	&#105;	i
10	A	012	LF (NL line feed, new line)	42	2A	052	&#42;	*	74	4A	112	&#74;	J	106	6A	152	&#106;	j
11	B	013	VT (vertical tab)	43	2B	053	&#43;	+	75	4B	113	&#75;	K	107	6B	153	&#107;	k
12	C	014	FF (NP form feed, new page)	44	2C	054	&#44;	,	76	4C	114	&#76;	L	108	6C	154	&#108;	l
13	D	015	CR (carriage return)	45	2D	055	&#45;	-	77	4D	115	&#77;	M	109	6D	155	&#109;	m
14	E	016	SO (shift out)	46	2E	056	&#46;	.	78	4E	116	&#78;	N	110	6E	156	&#110;	n
15	F	017	SI (shift in)	47	2F	057	&#47;	/	79	4F	117	&#79;	O	111	6F	157	&#111;	o
16	10	020	DLE (data link escape)	48	30	060	&#48;	0	80	50	120	&#80;	P	112	70	160	&#112;	p
17	11	021	DC1 (device control 1)	49	31	061	&#49;	1	81	51	121	&#81;	Q	113	71	161	&#113;	q
18	12	022	DC2 (device control 2)	50	32	062	&#50;	2	82	52	122	&#82;	R	114	72	162	&#114;	r
19	13	023	DC3 (device control 3)	51	33	063	&#51;	3	83	53	123	&#83;	S	115	73	163	&#115;	s
20	14	024	DC4 (device control 4)	52	34	064	&#52;	4	84	54	124	&#84;	T	116	74	164	&#116;	t
21	15	025	NAK (negative acknowledge)	53	35	065	&#53;	5	85	55	125	&#85;	U	117	75	165	&#117;	u
22	16	026	Y (synchronous idle)	54	36	066	&#54;	6	86	56	126	&#86;	V	118	76	166	&#118;	v
23	17	027	E (end of trans. block)	55	37	067	&#55;	7	87	57	127	&#87;	W	119	77	167	&#119;	w
24	18	030	CA (cancel)	56	38	070	&#56;	8	88	58	130	&#88;	X	120	78	170	&#120;	x
25	19	031	EM (end of medium)	57	39	071	&#57;	9	89	59	131	&#89;	Y	121	79	171	&#121;	y
26	1A	032	UB (substitute)	58	3A	072	&#58;	:	90	5A	132	&#90;	Z	122	7A	172	&#122;	z
27	1B	033	ESC (escape)	59	3B	073	&#59;	;	91	5B	133	&#91;	[	123	7B	173	&#123;	{
28	1C	034	FS (file separator)	60	3C	074	&#60;	<	92	5C	134	&#92;	\	124	7C	174	&#124;	
29	1D	035	GS (group separator)	61	3D	075	&#61;	=	93	5D	135	&#93;	]	125	7D	175	&#125;	}
30	1E	036	RS (record separator)	62	3E	076	&#62;	>	94	5E	136	&#94;	^	126	7E	176	&#126;	~
31	1F	037	US (unit separator)	63	3F	077	&#63;	?	95	5F	137	&#95;	_	127	7F	177	&#127;	DEL

Source: [www.LookupTables.com](http://www.LookupTables.com)

Remember A = 65, Z = 90, a = 97, z = 122

# Covering the Bases

- + What is 101111 in decimal form?
- + What is 59 in binary form?
- + What is 27 in octal (base-8) form?
- + What is 29 in hexadecimal (base-16) form?
- + What is 19 in base-22 form?

# Input-Output



Name and describe the ports!

Credit [silver-fox.ca](http://silver-fox.ca)



Name and describe the part!

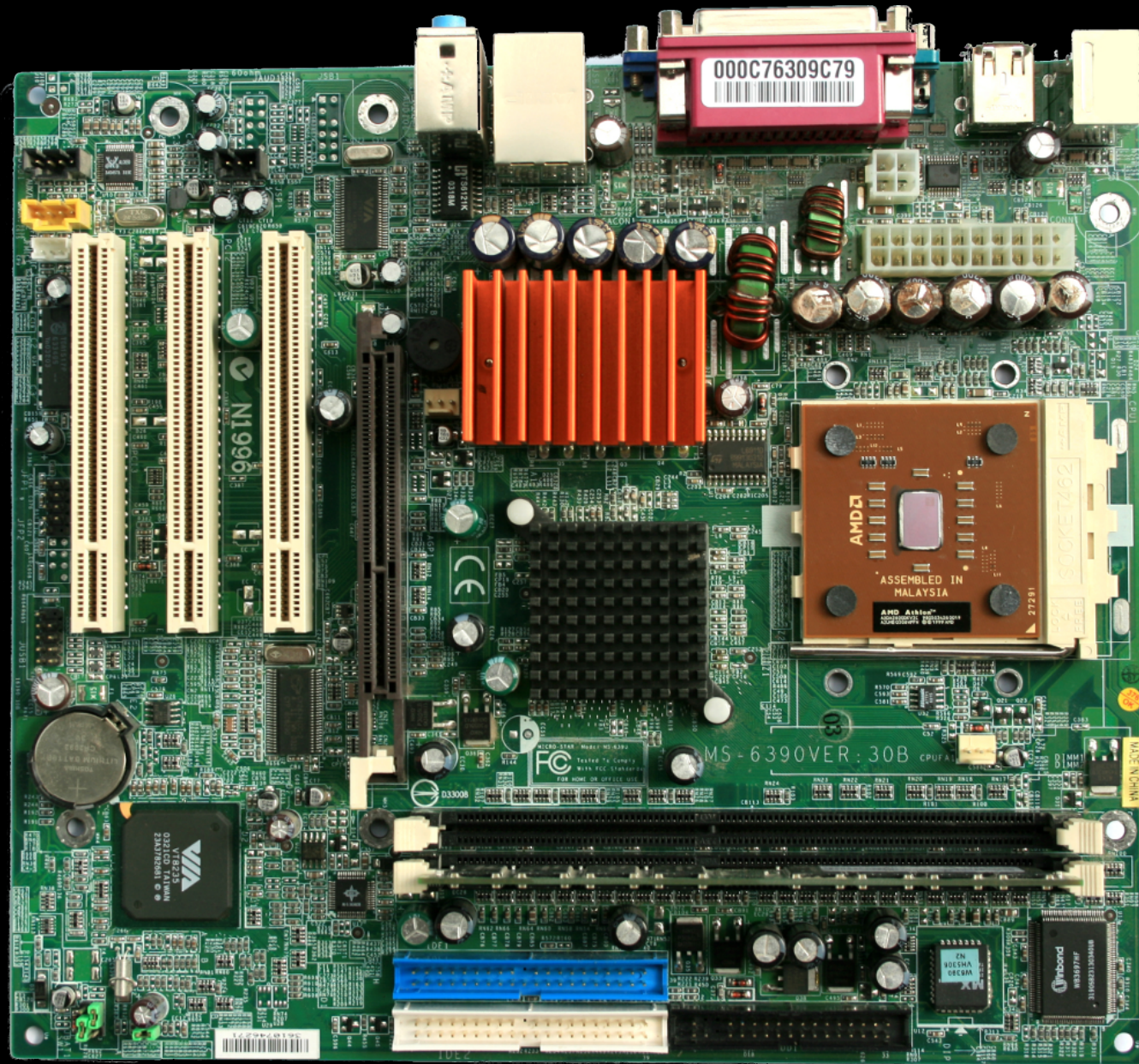


Credit: [latestprices.pk](http://latestprices.pk)



Credit: [vensys.co.uk](http://vensys.co.uk)





Credit: [WikiPedia](#)



Credit: [made-in-china.com](http://made-in-china.com)



CMOS Setup Utility - Copyright (C) 1984-2010 Award Software

► MB Intelligent Tweaker(M.I.T.)

► Standard CMOS Features

► Advanced BIOS Features

► Integrated Peripherals

► Power Management Setup

► PC Health Status

Load Fail-Safe Defaults

Load Optimized Defaults

Set Supervisor Password

Set User Password

Save & Exit Setup

Exit Without Saving

Esc : Quit

F8 : Q-Flash

↑↓→←: Select Item

F10 : Save & Exit Setup

F11 : Save CMOS to BIOS

F12 : Load CMOS from BIOS

Change CPU's Clock & Voltage

Credit: [hardwarespot.co.uk](http://hardwarespot.co.uk)

# Operating Systems



# Example Questions #1

+ Which of the following quantities is largest?

- 100MB
- 100GB
- 1,000KB
- 10Gb

+ How many bits are in a byte?

- 1
- 1,024
- 8
- 2

# Example Questions #2

- + The largest digit in binary is 1? - T or F
- + Downloading with a speed of 100kbps is faster than 100KB/s? - T or F

## Explanation

- + The decimal value of 'f' in ASCII is 102? - T or F
- + Virtual memory treats free space on a hard drive as ROM? - T or F



# Example Questions #3

*"For each of the quotes below, state whether the person knows or doesn't know what he or she is talking about. If the person doesn't know what he or she is talking about, explain why in one to three sentences."*

+ Just the other day, David said "I just bought a 640GB Intel Core i5 CPU!"

+ Just the other day, Peter said "If I upgrade my RAM from 2GB to 8GB I will have more room to store files."

# Example Questions #4

*"Each of the items below is usually described in terms of its capacity and/or speed. For each item, tell us what a typical capacity or speed is these days for that item."*

+ HDD \_\_\_\_\_

+ CPU \_\_\_\_\_

+ CD-RW \_\_\_\_\_

+ RAM \_\_\_\_\_

*Questions?*

*Fin*