

FINAL EXAMINATION PAPER-TRIMESTER 2 - 2014

CERTIFICATE IV IN ELECTRONICS ENGINEERING

EEE412: DIGITAL ELECTRONICS

DAY:

DATE:

TIME:

VENUE

SOLUTION

CONFIDENTIAL
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SECTION-A**FILL IN THE BLANKS****[10 Marks]**

Enter your choice of words only for the statements in Section A in the table below. When completed, insert this answer sheet into your answer booklet.

ANSWERS		MARKS
1	analog	1
2	digital	1
3	analog	1
4	digital	1
5	flip flop	1
6	SET	1
7	one	1
8	Logic probe	1
9	filtered	1
10	Low	1

SECTION-B**MULTIPLE CHOICE****[20 Marks]**

Indicate your answer by **circling** the letter of your choice (A), (B), (C), or (D) in the table below. When completed, insert your answer sheet into the answer booklet.

1	A	B	(C)	D
2	A	B	(C)	D
3	A	B	C	(D)
4	A	(B)	C	D
5	A	(B)	C	D
6	A	B	(C)	D
7	(A)	B	C	D
8	A	B	C	(D)
9	(A)	B	C	D
10	A	(B)	C	D

11	(A)	B	C	D
12	A	B	C	(D)
13	A	(B)	C	D
14	A	B	(C)	D
15	(A)	B	C	D
16	A	B	(C)	D
17	A	B	C	(D)
18	A	(B)	C	D
19	A	B	(C)	D
20	(A)	B	C	D

If you think you made a wrong choice and would like to choose another one, cross it off (X) clearly and circle your new choice, if you want to change your mind and go back to your original choice, indicate by crossing your second choice (X) and ticking your original choice.

SECTION-C**TRUE OR FALSE****[10 Marks]**

For each of the following statements, determine if its "True" or "False". Indicate your chosen answer in the answer sheet provided by circling **(T)** if it's true or **(F)** if it's False. When you finish, tear off the answer sheet, insert it in your answer booklet and secure with a string.

1	(T)	F
2	(T)	F
3	T	(F)
4	(T)	F
5	(T)	F
6	(T)	F
7	T	(F)
8	T	(F)
9	(T)	F
10	(T)	F

If you think you made a wrong choice and would like to choose another one, cross it off (X) clearly and circle your new choice, if you want to change your mind and go back to your original choice, indicate by crossing your second choice (X) and ticking your original choice.

SECTION-D**SHORT ANSWER QUESTIONS****[20Marks]**

1.	(a) TTL IC-BJT or Bipolar Junction Transistor (b) CMOS- MOSFET	1 1
2.	(i) Propagation delay time (ii) Fan-out (iii) power dissipation	1 1 1
3.	(i) ECL is the fastest as it has the least propagation delay time	1
	(ii) CMOS and ECL has more fan-out capability compared to TTL	1
	(iii) CMOS has the least power consumption while compared to ECL and TTL	1
	(iv) CMOS can withstand more noise than ECL and TTL	1
	(v) CMOS is best to use as it has more advantages	1

4. (a) LOW (b) HIGH [2 marks, (1 mark each)]

5. (a) HIGH (b) LOW [2 marks, (1 mark each)]

6. It is equivalent to an AND Gate. (2 marks)

7. To shift the voltage levels (1 mark)

8. Fan Out (1 mark)

9. It has low power consumption. (1 mark)

10. ASCII Code. (1 mark)

SECTION-E**DEFINITIONS – DEVICES - IDENTIFICATION****[10 Marks]**

1.	a)Polarizer	.5
	b)Conductive pattern on glass	.5
	c)Liquid crystal	.5
	d)Metalized layer	.5
	e)Glass back plane	.5
	f)Metalized segments	.5

2.	a) Electrically programmable read-only memory	.5
	b) Programmable read-only memory	.5
	c) Single-in-line memory module	.5
	d) Dual-in-line memory module	.5

3.	i) Motherboard	1
	ii) CMOS battery	1
	iii) RAM slots	1
	iv) Processor	1
	v) EPROM	1

End of solutions