

Republic of the Philippines
SULTAN KUDARAT STATE UNIVERSITY
COLLEGE OF COMPUTER STUDIES
Isulan Campus, Isulan Sultan Kudarat

AT316 – Digital Design
Midterm Examination

Name : _____ Year /Section: _____ Score: _____

I. Multiple Choice (Write the correct letter in the space provided before the number)

- _____ 1. The physical quantities or signals may vary continuously over a specified range.
a. Digital System b. Binary System c. Analog System d. Discrete System
- _____ 2. The physical quantities or signals can assume only discrete values.
a. Digital System b. Binary System c. Analog System d. Discrete System
- _____ 3. Which Binary values is not represented abstractly?
a. Digits 0 and 1 b. False (F) and True (T) c. On and Off d. 1 and 2
- _____ 4. What is the decimal value of 110101
a. 54 b. 65 c. 53 d. 23
- _____ 5. Convert c986 from hexadecimal to base 2
a. 1100 1001 1000 0111 b. 1100 1001 1000 0110
c. 1100 1001 1000 1110 d. 1100 1001 1000 1111
- _____ 6. Convert 245 from decimal to base 2
a. 1111 0111 b. 1110 0101 c. 1111 0101 d. 1111 0100
- _____ 7. Convert fb9c from base 16 to binary
a. 1111 1011 1001 1101 b. 1111 1011 1001 1100
c. 1110 1011 1001 1100 d. 1111 1010 1001 1100
- _____ 8. Convert 1011 1000 from binary to base 10
a. 180 b. 194 c. 182 d. 184
- _____ 9. Convert 101 101 101 from base 2 to base 8
a. 555 b. 525 c. 545 d. 545
- _____ 10. Convert 0100 0000 from binary to decimal
a. 64 b. 60 c. 62 d. 54
- _____ 11. Convert 5afe from hexadecimal to binary
a. 0101 1011 1111 1110 b. 0111 1010 1111 1111
c. 1101 1010 1111 1110 d. 0101 1010 1111 1110
- _____ 12. Convert 93 from decimal to base 2
a. 0101 1111 b. 0111 1101 c. 0101 1101 d. 1101 1101
- _____ 13. Convert 011 010 001 from binary to base 8
a. 321 b. 323 c. 421 d. 322
- _____ 14. Convert 212 from base 10 to base 2
a. 1101 0110 b. 1001 0100 c. 1101 0100 d. 1101 1100
- _____ 15. Convert 1100 0000 0010 1110 from base 2 to hexadecimal
a. c02f b. c02e c. d02e d. c12e

II. Computation (Compute the following problems. Show your solutions.) 3pts each

- 16 Convert 0101 from base 2 to base 10
17 Convert 0110 0000 0000 0111 from base 2 to hexadecimal
18 Convert 101 from base 10 to binary
19 Convert 1100 1111 1011 1110 from binary to hexadecimal
20 Convert 22 from base 8 to base 2
21 Convert 6546 from hexadecimal to binary
22 Convert 234 from base 10 to base 2
23 Convert 111 111 100 from base 2 to octal
24 Convert 1010 0111 from binary to decimal
25 Convert 251 from decimal to binary

III. Computation (Simplify the following Boolean Expression)

- 26. $xy + xy'$
- 27. $xyz + x'y + xyz'$
- 28. $(A + B)'(A' + B')$
- 29. $(x + y)'(x' + y')$
- 30. $A'C' + ABC + AC'$

IV. Illustration (Draw the symbols of the following gates)

- 31. AND Gate
- 32. OR Gate
- 33. NOT Gate

Prepared By:

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Course Number/Description: CS 118 – Digital Design

Term: Midterm Exam

Semester: 2nd Semester

Prepared by: ZIUS D. APRESTO

Date Submitted:

TABLE OF SPECIFICATIONS

Topics/Content	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation	No. of Item	Score
Digital System and Binary Numbers	3(1,2,3)			12(4,5,6,7,8,9,10,11, 12,13,14,15) 10(16-25)			25	25
Boolean Algebra and Logic Gates				15(26-30)	6(31-33)		21	21
Total No. of Items	3			37	6		46	
Total Score	3			37	6			46

Summary:

	No. of Points
Test I:	15
Test II:	10
Test III:	15
Test IV	6
Total Score	46

Checked by: _____

Date: _____