Started on	Thursday, 7 December 2023, 6:00 PM
State	Finished
Completed on	Thursday, 7 December 2023, 6:28 PM
Time taken	28 mins 4 secs
Grade	11.00 out of 12.00 (91.67%)

Question 1 Complete Mark 1.00 out of 1.00

Carry out the following conversion (43.875)₁₀ = (?)₂

a. 1010110.111

b. 101011.111

c. 101001.0111

d. 101010.111

e. 101011.0111

Question 2	
Complete	
Mark 1.00 out of 1.00	

Find canonical SOP of the standard function:

 $F(x,y,z) = xy^+yz^*$

- a. \(\sum_{(2,4,5,6)} \)
- ob. None
- c. ∑(0,1,3,7)
- od. \prod (0,1,3,6,7)
- e. ∏ (2,4,5,6)

Question **3**

Complete

Mark 1.00 out of 1.00

What's the corresponding decimal value of the unsinged binary number? $(11111101110.000111)_2$

- a. 2030.109375
- ob. 2021.108375
- oc. 2041.008375
- od. 2031.109375
- о e. _{2031.008375}

Question 4

Complete

Mark 1.00 out of 1.00

Assume that $F(A,B,C) = \Pi(1,2,3,6)$ and $G(A,B,C) = \Sigma(0,2,4,6)$, The expression of the function F`.G as a sum-of-minterms is

Select one:

- a. m2+m7
- b. m2+m6
- oc. m1+m2
- od. m1+m6
- e. m2+m4

Question **5**

Complete

Mark 1.00 out of 1.00

Find the complement of the function in minterm list form:

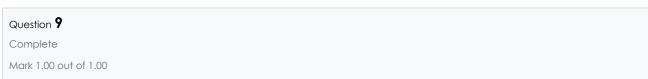
$$F(x,y,z) = x^y^+ yz + xz^*$$

- o a. ∏ (2,5)
- ob. None
- oc. $\prod (0,1,3,4,6,7)$
- \circ d. $\sum (2,5)$
- \circ e. $\sum (0,1,3,4,6,7)$

Question 6
Complete
Mark 1.00 out of 1.00
What's the complement of $F(A,B,C)=\prod(0)$
As a sum of products
□ a. Σ(1,2,3,4,5,6,7)
□ c. A+B+C
□ d. A`+B`+C`
□ e. ∏(1,2,3,4,5,6,7)
_
Question 7 Complete
Mark 1.00 out of 1.00
Using algebraic manipulations Simplify the following expression to a minimal number of literals:
A+ A`B+ B`
Select one:
○ a. AB
O b. A`
• c. 1
O d. 0
○ e. A

Question 8	
Complete	
Mark 1.00 out of 1.00	





Perform the following operation (+15) – (+7), the result of the operation and carry values, respectively, are?

a. Result= 11000, Carry= 0

b. Result= 01000, Carry= 1

c. Result= 01000, Carry= 0

d. Result= 11000, Carry= 1

Question 10

Complete

Mark 1.00 out of 1.00

Perform the following operation $(101101)_2$ - $(110110)_2$ = (?)₂, using 6-bit 2's complement representation?

- o. 100011
- ob. 110110
- oc. 1100011
- d. 110111

Question 11

Complete

Mark 1.00 out of 1.00

Find the complement of the function in maxterm list form:

$$F(a,b,c) = \prod (0,1,2,4,6)$$

- [●] a. ∏ (3,5,7)
- \circ b. $\sum (3,5,7)$
- ° c. a'bc +a'bc'+abc
- \circ d. $\sum (0,1,2,4,6)$
- ⁰ e. (a`+b+c)(a`+b+c`)(a+b+c)

Question 12	
Complete	
Mark 0.00 out of 1.00	

The magnitude of (-122) ₁₀
оа. 011110000110
○ b. 100001111010
° c. 000001111010
000001111010
[◎] d. 111110000110