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G.C.E. (A/L) ICT

Number Systems

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Answer all the questions

01. Write down the followings in binary form. Show calculations.

(a) 54_{10} **(b)** 17_{10}

02. Write down the followings in decimal form. Show calculations.

(a) 1101_2 **(b)** 10111_2

03. Write down the followings in octal form. Show calculations.

(a) 108_{10} **(b)** 76_{10}

04. Write down the followings in decimal form. Show calculations.

(a) 44_8 **(b)** 23_8

05. Write down the followings in hexadecimal form. Show calculations.

(a) 106_{10} **(b)** 54_{10}

06. Write down the followings in decimal form. Show calculations.

(a) 101_{16} **(b)** $A23_{16}$

07. Write down the followings in binary form. Show calculations.

(a) AC_{16} **(b)** $2F_{16}$

08. Write down the followings in binary form. Show calculations.

(a) 123_{8} **(b)** 564_{8}

09. Write down the followings in hexadecimal form. Show calculations.

(a) 10101011_{2} **(b)** 110100101_{2}

10. Write down the followings in octal form. Show calculations.

(a) 10101011_2 **(b)** 110100101_2

11. Write down the followings in 1's complement 8-bits method. Show calculations.

(a) 8_{10} **(b)** -9_{10}

12. Write down the followings in 2's complement 8-bits method. Show calculations.

(a) 8_{10} **(b)** -9_{10}

13. Write down the value of $(9_{10} + 4_{10})$ in 1's complement 8-bits method. Show calculations.

14. Write down the value of $(9_{10} + 4_{10})$ in 2's complement 8-bits method. Show calculations.

15. Write down the value of (9_{10} - 4_{10}) in 1's complement 8-bits method. Show calculations.

14. Write down the value of (9_{10} - 4_{10}) in 2's complement 8-bits method. Show calculations.

15. Write down the value of (7_{10} + 5_{10}) in 2's complement 4-bits method. Show calculations.

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