Lab Quiz 11
Closed Book and Notes – No Calculators Allowed

1. The **five-bit** sign and magnitude number SM$(10110)_2$ converted to **radix** notation is:
    (A) R$(11010)_2$
    (B) R$(00110)_2$
    (C) R$(10110)_2$
    (D) R$(11011)_2$
    (E) none of the above

    $-(00110)_2$
    $R(11010)_2$

2. The **five-bit** diminished radix number DR$(10110)_2$ converted to **radix** notation is:
    (A) R$(10101)_2$
    (B) R$(01001)_2$
    (C) R$(10110)_2$
    (D) R$(10111)_2$
    (E) none of the above

    $-(01001)_2$
    $R(10111)_2$

3. The **five-bit** radix number R$(10110)_2$ extended to **eight bits** is:
    (A) R$(00010110)_2$
    (B) R$(10010110)_2$
    (C) R$(11110110)_2$
    (D) R$(11101110)_2$
    (E) none of the above

4. When **adding** the **five-bit** signed numbers $(10111)_2$ + $(11000)_2$ using **radix arithmetic**, the result obtained is:
    (A) $(00000)_2$
    (B) $(10000)_2$
    (C) $(01111)_2$
    (D) overflow *(invalid result)*
    (E) none of the above

    $\begin{array}{r} 10111 \\ + 11000 \\ \hline 1)01111 \end{array}$ OVF

5. When **subtracting** the **five-bit** signed numbers $(10111)_2$ − $(11000)_2$ using **radix arithmetic**, the result obtained is:
    (A) $(01110)_2$
    (B) $(11111)_2$
    (C) $(11110)_2$
    (D) overflow *(invalid result)*
    (E) none of the above

    $\begin{array}{r} 10111 \\ -11000 \\ \hline \end{array} \rightarrow \begin{array}{r} 10111 \\ 00111 \\ + \quad 1 \\ \hline 11111 \end{array}$

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