ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution

FOR GOD AND COUNTRY

WORKSHEET -19(ANSWER KEY)

Topic – Serial and Parallel Registers

Subject: COMPUTER SCIENCE **Class - 12** **F.M:15**

Chapter: Sequential Logic Circuits **Date: 23/06/2020**

Choose the correct answer for each question: [15 X 1 = 15]

1. What is the bit storage binary information capacity of any flip-flop?
   a. **1 bit**
   b. 2 bits
   c. 16 bits
   d. infinite bits
2. A 4-bit shift register can be formed by connecting _____flip-flops where each flip flop stores a single bit of data.
   a. One
   b. Two
   c. Four
   d. Eight
3. Based on how binary information is entered or shifted out, shift registers are classified into _____ categories.
   a. One
   b. Two
   c. Three
   d. Four
4. The full form of SIPO is _____
   a. **Serial-in Parallel-out**
   b. Parallel-in Serial-out
   c. Serial-in Serial-out
   d. Serial-In Peripheral-Out
5. The full form of PISO is _____
   a. Serial-in Parallel-out
   b. **Parallel-in Serial-out**
   c. Serial-in Serial-out
   d. Serial-In Peripheral-Out
6. How can parallel data be taken out of a shift register simultaneously?
   a. Use the Q output of the first FF
   b. Use the Q output of the last FF
   c. Tie all of the Q outputs together
   d. **Use the Q output of each FF**

7. Which type of shift register is renowned as 'bit bucket brigade circuit' by presenting the input data and applying the clock pulse for the movement of bits across the storage elements?
   a. **Serial In - Serial Out (SISO)**
   b. Serial In - Parallel Out (SIPO)
   c. Parallel In - Parallel Out (PIPO)
   d. Parallel In - Serial Out (PISO)
8. What is/are the directional mode/s of shifting the binary information in a shift register?
   a. Up-Down
   b. **Left - Right**
   c. Front - Back
   d. All of the above
9. Which time interval specifies the shifting of overall contents of the shift registers?
   a. Bit time
   b. Shift time
   c. **Word time**
   d. Code time

10. The bit sequence 0010 is serially entered (right-most bit first) into a 4-bit parallel out shift register that is initially clear. What are the Q outputs after two clock pulses?

    a. 0000
    b. 0010
    c. **1000**
    d. 1111

11. What is a shift register that will accept a parallel input, or a bidirectional serial load and internal shift features, called?
    a. Tristate
    b. End around
    c. Universal
    d. conversion
12. Shift registers are used for:
    a. Temporary data storage
    b. Data transfer
    c. Data manipulation
    d. All of the above
13. A Parallel in Serial out shift register us used to convert _____data to _____ data.
    a. Parallel, serial
    b. Serial, Parallel
    c. Not possible
    d. None of the above

14. The full form of SISO is _____.
    a. Serial-in Parallel-out
    b. Parallel-in Serial-out
    c. **Serial-in Serial-out**
    d. Serial-In Peripheral-Out
15. A serial in/parallel out, 4-bit shift register initially contains all 1s. The data nibble 0111 is waiting to enter. After four clock pulses, the register contains _____
    a.0000
    b. 1111
    c. **0111**
    d. 1000

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