

Quiz No. 2 Solution

- Q1. Ripple counters should, generally, be avoided
(a) Because it is an asynchronous design
- Q2. Which of the following memories stores the most number of bits
(c) 32M×8 memory.
- Q3. A clocked RS FF, with the illegal state replaced with a new 'toggle' state
(b) Has the same functionality as the J-K FF
- Q4. The Gray code for decimal number 7 is equivalent to
(c) 0100
- Q5. In sequential Design, Setup time and hold time of the FF inputs
(d) Are the minimum durations during which the data must remain stable
- Q6. Which of the memory is volatile memory
(c) RAM
- Q7. Excitation Table shows
(a) The input value of a given FF given the current state and a particular next state
- Q8. The modified state transition table is applied to design a specific solution in order to
(b) Generate the input functions for a particular FF-type
- Q9. EPROM contents can be erased by exposing it to
(a) Ultraviolet rays.
- Q10. The gates required to build a half adder are
(b) EX-OR gate and AND gate
- Q11. The excess 3 code of decimal number 26 is
(c) 01011001
- Q12. In a RAM, information can be stored
(A) By the user, number of times.
- Q13. The process of entering data into a ROM is called

(c) programming the ROM

Q14. The output of SR LATCH when $S=1$, $R=0$ is

(a) 1

Q15. The result of adding hexadecimal number A6 to 3A is

(b) E0.

Q16. A characteristic table for a FF shows

(a) The next state of the output in terms of its current state and current inputs

Q17. What is the Gray Code equivalent of $(25)_{10}$?

(c) 00110111.

The binary equivalent of Decimal number 25 is $(00100101)_2$

1. The left most bit (MSB) in gray code is the same as the left most in binary

2. Add the left most bit to the adjacent bit

3. Add the next adjacent pair and so on., Discard if we get a carry.

$0 + 0 + 1 + 0 + 0 + 1 + 0 + 1$

0 0 1 1 0 1 1 1 Gray Number

Q18. A full adder logic circuit will have

(d) Three inputs and two outputs.

Q19 Which table does show a FF input value required to achieve a particular next state from a given current state?

(c) Excitation table

The output of a JK flipflop with asynchronous preset and clear inputs is '1'. The output

Q20. can be changed to '0' with one of the following conditions.

(c) By applying $J = 1$, $K = 1$ and using the clock.