19 Lecture - CS302

Important Mcqs

1. **What is the purpose of a demultiplexer?**
2. a) To route one input to several outputs b) To route several inputs to one output c) To combine multiple signals into one output d) None of the above

Solution: a

2. **How many control lines are required for a 4-to-1 demultiplexer?** a) 1 b) 2 c) 3 d) 4

Solution: b

3. **Which logic gate is commonly used to implement a demultiplexer?** a) AND gate b) OR gate c) NOT gate d) XOR gate

Solution: a

4. **What is the output of a demultiplexer when all control lines are low?** a) All outputs are low b) All outputs are high c) One output is high and the rest are low d) None of the above

Solution: a

5. **Which demultiplexer is commonly used for decoding address lines in memory devices?** a) 1-to-2 demultiplexer b) 2-to-4 demultiplexer c) 3-to-8 demultiplexer d) 4-to-16 demultiplexer

Solution: c

6. **Which demultiplexer is equivalent to two 2-to-1 demultiplexers?** a) 1-to-2 demultiplexer b) 2-to-4 demultiplexer c) 3-to-8 demultiplexer d) 4-to-16 demultiplexer

Solution: b

7. **What is the function of the enable input in a demultiplexer?** a) To select which output to route the input to b) To enable or disable the demultiplexer c) To control the polarity of the output signals d) None of the above

Solution: b

8. **Which demultiplexer is commonly used for separating the color signals in a video signal?** a) 1-to-2 demultiplexer b) 2-to-4 demultiplexer c) 3-to-8 demultiplexer d) 4-to-16 demultiplexer

Solution: a

9. **What is the difference between a demultiplexer and a decoder?** a) A decoder has multiple inputs and one output, while a demultiplexer has one input and multiple outputs b) A decoder is used for data compression, while a demultiplexer is used for data expansion c) A decoder outputs binary codes, while a demultiplexer outputs analog signals d) There is no difference between a demultiplexer and a decoder

Solution: a

10. **Which demultiplexer is commonly used for splitting a serial data stream into parallel data streams?** a) 1-to-2 demultiplexer b) 2-to-4 demultiplexer c) 3-to-8 demultiplexer d) 4-to-16 demultiplexer

Solution: a