1. As a digital designer, you will occasionally need to redesign an existing circuit. In doing so, you will come across part numbers that you are not familiar with. Use the internet to identify the functionality and manufacturer of each of the part numbers listed below. Note that many parts will have several manufacturers. For the purpose of completing this table, only list one. Also, do not print these datasheets. Simply view them online and extract the necessary information.

|  |  |  |
| --- | --- | --- |
| Part Number | IC Name / Function | Manufacturer |
| DM74LS00 |  | Fairchild Semiconductor |
| SN74LS02 |  |  |
| DM74LS75 |  |  |
| SN74LS86 |  |  |
| MAN6760 |  |  |

1. When you design a digital logic circuit, you will often need a gate that performs a specific function. You may be unsure of its part number. Use the internet to identify the 74LS series part number for each of the following five gates. Again, do not print these datasheets. Simply view them online and extract the necessary information.

|  |  |  |
| --- | --- | --- |
| Gate Symbol | Gate Name / Function | 74LS Series Part Number |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Conclusion

1. Using the datasheet obtained for the 74LS04 Hex Inverter Gates as a reference, answer the following questions:
   1. What is the nominal Supply Voltage (Vcc)?
   2. What is the maximum Free Air Operating Temperature (TA)?
   3. What is the typical LOW-to-HIGH Propagation Delay (TPLH)?
2. Find the answers:
   1. (i) What is the function of a MAN6760?
   2. (ii) How many pins does an LM555 time have?
   3. (iii) What is the maximum supply voltage for a 74LS08?