|  |  |
| --- | --- |
| **1. Boolean Algebra**  =  =  =  =  =  =  So   Therefore (0, 1) and (0, 0) make it true. | **1.** (0,1) and (0, 0) |
| **2. Boolean Algebra**  =  =  =  =  =  = | **2.** |
| **3. Data Structures**  Nibbles Wood Away is the name of the Big Blue Bug that is a  Rhode Island icon atop a building in Providence. | **3.** A, B, E, O |
| **4. Data Structures**    The queue is constructed using FIFO as follows: O, OC, OCE, CE, CEA,  CEAN, EAN, AN, ANS, ANST, NST, NSTA, NSTAT, NSTATE, STATE,  TATE. The next item popped is T. | **4.** T |
| **5. What Does This Program Do? - Arrays**   |  |  |  |  | | --- | --- | --- | --- | | 3 | 5 | 7 | 9 | | 5 | 8 | 11 | 14 | | 7 | 11 | 15 | 19 | | 9 | 14 | 19 | 24 |   After the first nested loop is  executed, the array is at the  right.  The second nested loop sets  multiples of 2 or 3 or 5 equal  to 0. Only prime numbers are left. The largest prime is 19  and the smallest is 7. The positive difference is 12. | **5.** 12 |