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| 1. | Perform BCD addition on the following numbers   1. 18 and 23 | 5 |
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| 2. | a) Simplify the following Boolean function to minimum number of literals.  A'B'D+BD+A'C'D  b) Implement the simplified term of a) with only AND and NOT gate | 5+3 |
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| 3. | Write the Boolean expression for output x in figures below. Determine the value of x for all  possible input conditions, and list the values in a truth table.    C:\Users\Jubaid\Desktop\AA.jpg  a)  b) | 5 |
| 4. | Design a 4 bit incrementer. Consider that an incrementer simply increment the input values. | 6 |
| 5. | a) Find the complement of the following expressions  D(AC + B’) + BC  b) Then express it in terms of sum of Products | 3+3 |
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