

• Third code challenge:-

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$$Y = (AB' + C)(B'D') + (A + C)'$$

⇒ Using De Morgan's law

$$Y = (AB' + C)(B' + D') + A'C'$$

$$= AB'B' + AB'D' + CB' + CD' + A'C'$$

$$= AB' + AB'D' + CB' + CD' + A'C'$$

$$= AB' + CD' + CB' + A'C' + AB'D'$$

$$= A'C' + AB' + B'C + CD'$$

Truth table:-

S	Z
0	0
1	1

