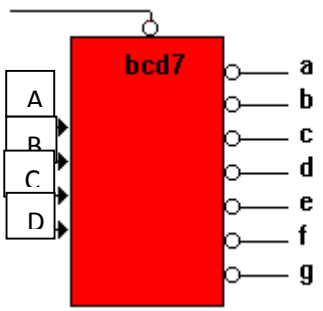
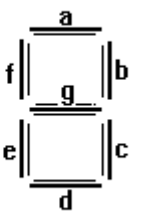
1) Binary to 7-segment decoder is a combinational circuit that converts a binary number to decimal digit. The 7 outputs of the decoder (a, b, c, d, e, f, g) selects the corresponding segments in the displays shown in part A below. The numeric display chosen to represent the decimal digit is shown in part B below. The 6 invalid combinations should result in blank display. Design a Binary to 7 segment decoder circuit with using minimum number of the gates..





Inputs				outputs						
A	B	C	D	a	b	c	d	e	f	g