

Digital Logic Design: CBSE CS

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Abstract—This manual provides solutions to Digital Design problems from Computer Science papers in the CBSE board exams.

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1.1. Reduce the following Boolean Expression to its simplest form using K-Map :

$$F(P, Q, R, S) = \sum(0, 1, 2, 3, 5, 6, 7, 10, 14, 15) \quad (1.1.1)$$

Solution: The logic expression is obtained from Fig. 1.1.1 as

$$F = P'Q + RS' + P'S + QR \quad (1.1.2)$$

		RS			
		00	01	11	10
PQ	00	1	1	1	1
	01	0	1	1	1
	11	0	0	1	1
	10	0	0	0	1

Fig. 1.1.1

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