Digital Electronics

(a) What is DeMorgan’s theorem? [4 marks]

(b) What are minterms, essential terms and prime implicants? [6 marks]

(c) What are the prime implicants, essential terms and minimum sum of products for \( f = (a.b) \oplus (c + d) \)? [6 marks]

(d) Whenever \( g = a.b \) is true, if we do not care what the output of \( f \) is, determine the new minimum sum of products form for \( f \). [4 marks]