Part A. Give deductions for the following arguments, using the rules C.P. and I.P.

(1)
1. \((A \lor B) \supset (C \land D)\)  Prem  \(\therefore A \supset D\)

(2)
1. \((A \lor B) \supset (A \land B)\)  Prem  \(\therefore A \equiv B\)

(3)
1. \(A \lor (B \land C)\)  Prem
2. \(A \supset D\)  Prem
3. \(D \supset E\)  Prem  \(\therefore \neg E \supset B\)

(4)
1. \(C \supset [A \lor (B \land C)]\)  Prem
2. \(\neg B\)  Prem  \(\therefore C \supset (A \lor D)\)

(5)
1. \(A \supset (B \land C)\)  Prem
2. \((D \land C) \supset (E \land F)\)  Prem  \(\therefore (A \land D) \supset E\)
Ex. 2. 10. A.

(6)
1. \((A \land \sim B) \supset C\)  Prem
2. \(B \supset C\)  Prem
3. \(\sim(\sim A \land \sim B)\) Prem  \(\therefore\ C\)

(7)
1. \(A \supset \sim B\)  Prem
2. \(C \supset (D \supset B)\)  Prem  \(\therefore\ D \supset (\sim A \lor \sim C)\)

(8)
1. \(E \supset (A \supset B)\)  Prem
2.  \(\therefore\ E \supset [(A \lor B) \supset B]\)

(9)
1. \((A \land B) \supset C\)  Prem
2. \((A \land \sim B) \supset E\)  Prem  \(\therefore\ A \supset (C \lor E)\)

(10)
1. \((A \supset B) \lor (A \supset C)\)  Prem
2. \(B \supset D\)  Prem
3. \(C \supset D\)  Prem  \(\therefore\ A \supset D\)