ELECTRONIC

1. A
2. A
3. C
4. A
5. A
6. - doping tetravalent element with trivalent element; P1
   - During the bonding there is a deficit of electron - hole P1

7. (a) supply connected correctly (to left & right) B1
    load connected correctly (to top & bottom) B1 [2]
    (b) e.g. power supplied on every half-cycle
    greater average/mean power
    (any sensible suggestion, 1 mark) B1 [1]
    (c) (i) reduction in the variation of the output voltage/current B1 [1]
    (ii) larger capacitance produces more smoothing M1
    either product RC larger
    or for the same load A1 [2]

8. (a)

P and N portions shown [1m]
Positive terminal to p-type [1m]

(b)
Axes labeled [1m]
Reverse characteristics [1m]
Forward characteristics [1m]  

9.
(a) Intrinsic - these are pure semiconductor materials [1m]
Extrinsic - these are semi-conductors into which impurities have been added [1m]
(b) The process of adding certain elements (impurities) to enhance conductivity [1m]
(c) Antimony, arsenic or phosphorous [1m]