(c)

Define a relation $\sim$ on the set of vertices by saying $v \sim w$ if
(i) $v = w$ or
(iii) there is a path from v to w and a path from w to v
Convince yourself that this is an equivalence relation. Write down the equivalence classes.

The equivalence classes are:

- $\{1\}$
- $\{2\}$
- $\{3\}$
- $\{4\}$
- $\{5, 6\}$
- $\{7, 8\}$
- $\{9, 10, 11\}$