

Fig. 2.3 Exercise 2.1

2.2 Parallel Activities

Parallel activities or concurrency can be easily expressed in terms of Petri nets. For example, in the Petri net shown in Fig. 2.4, the parallel or concurrent activities represented by transitions t_2 and t_3 begin at the firing of transition t_1 and end with the firing of transition t_4 .

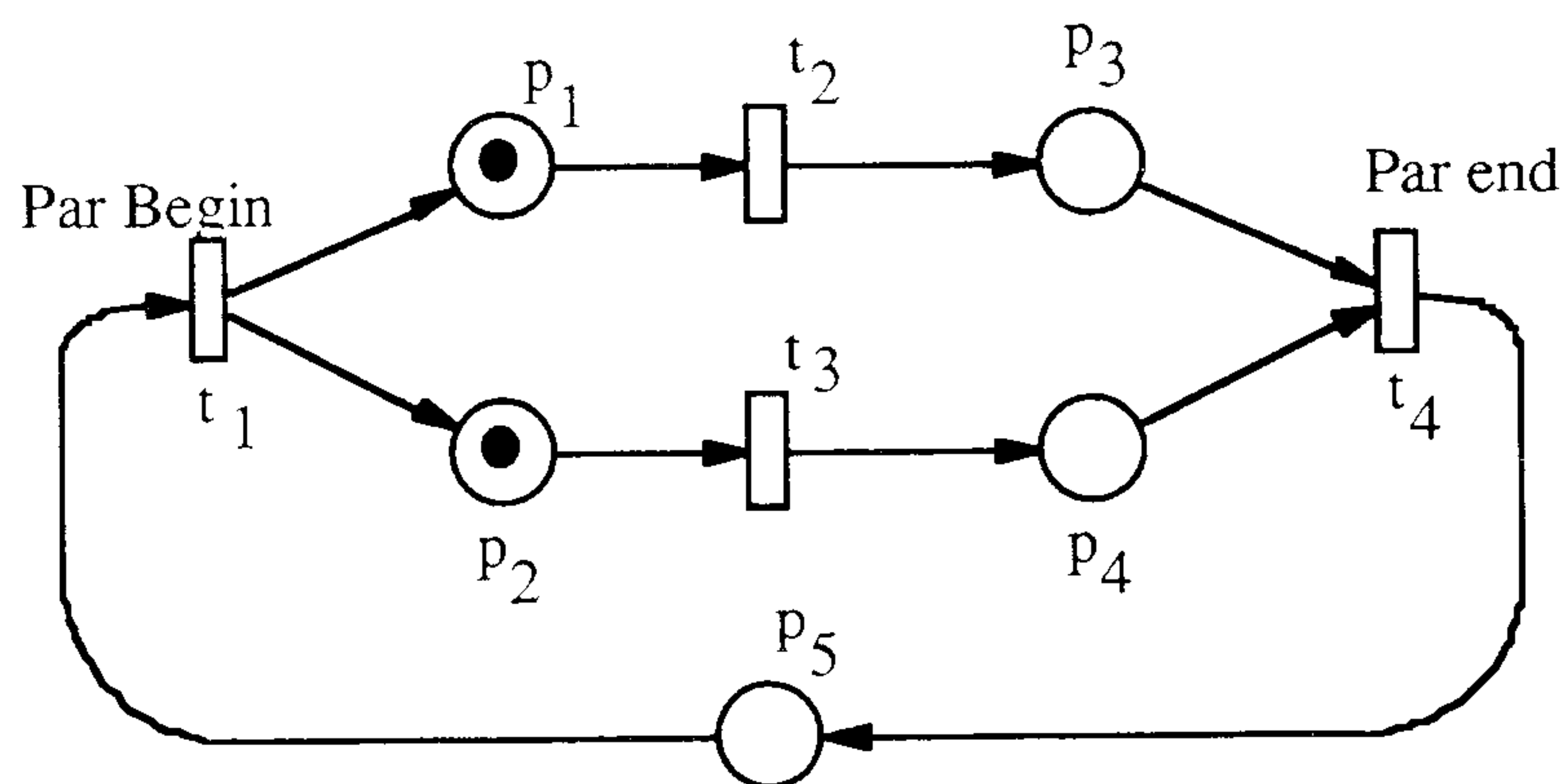


Fig. 2.4. A Petri net (a marked graph) representing deterministic parallel activities.

In general, two transitions are said to be *concurrent* if they are causally independent, i.e., one transition may fire before or after or in parallel with the other, as in the case of t_2 and t_3 in Fig. 2.4. It has been pointed out [172] that concurrency can be