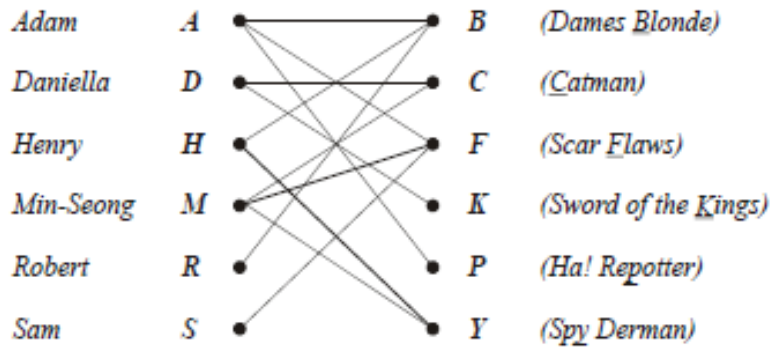
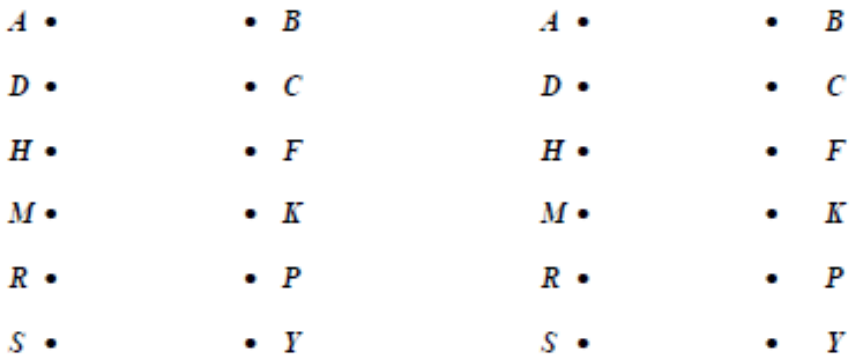
10. (a) Define the term 'alternating path'.

(2)



The bipartite graph in the figure above shows the films that six customers wish to hire this Saturday evening. The shop has only one copy of each film. The bold lines indicate an initial matching.

(b) Starting from this initial matching use the maximum matching algorithm twice to obtain a complete matching. You should clearly state the alternating paths that you use.



(5)
(Total 7 marks)