6.

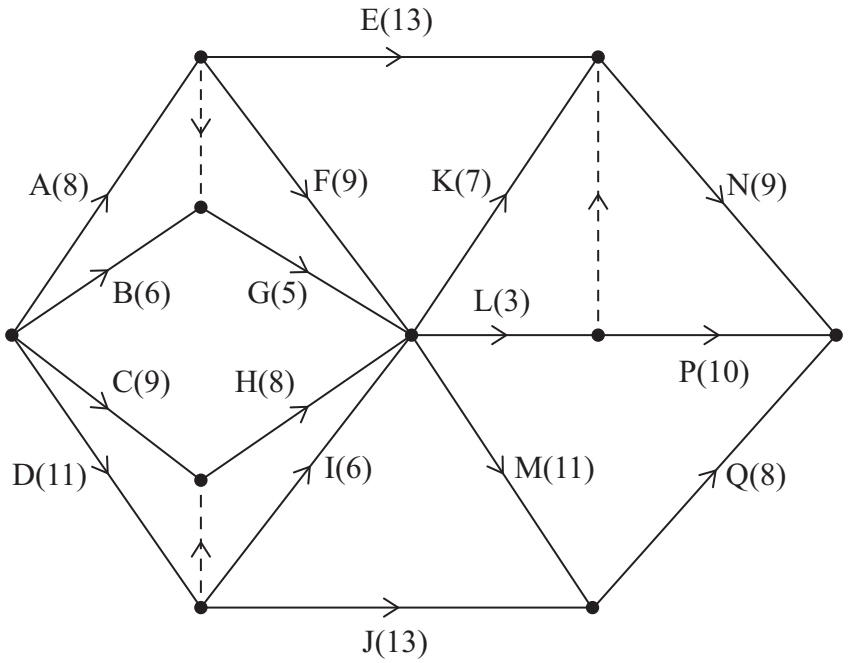


Figure 4

A project is modelled by the activity network shown in Figure 4. The activities are represented by the arcs. The number in brackets on each arc gives the time, in days, to complete the corresponding activity. Each activity requires exactly one worker. The project is to be completed in the shortest possible time.

(a) Complete the diagram in the answer book to show the early event times and the late event times.

(4)

(b) State the critical activities.

(1)

(c) Calculate a lower bound for the minimum number of workers required to complete the project in the shortest possible time.

(2)

(d) Calculate the total float for activity L, showing your working.

(1)

(e) Draw a schedule on the grid in the answer book to show how the project can be completed in the shortest possible time using the minimum number of workers.

(4)

(Total for Question 6 is 12 marks)