## Critical path analysis 8G

**1 a** $A, E$

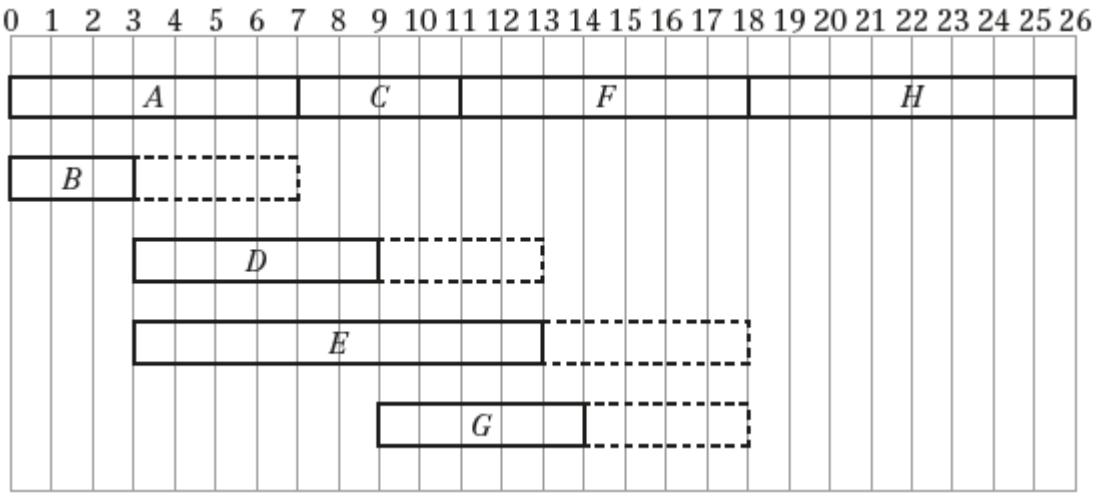
**b** $G, H$

**c** $F, H$

**2 a** $C, D$

**b** $E, G$

**3 a**




**b** $B$, $D$ and $E$ may be happening at midday on day 5.

**c** Only $A$ must be happening at midday on day 7.

**4 a** The largest value $y$ is an early event time and calculated starting from 0 at the source node and working towards the sink node.

$y = 12 + 11 + 2$

$= 25$

The late event times are calculated starting from the sink node and working backwards towards the source node.

$x = 42 - 15 - 5 - 7$

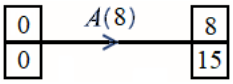
$= 15$

$z = 42 - 15$

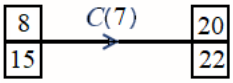
$= 27$

**b** The critical path is $B - F - H - K - M$

**c**

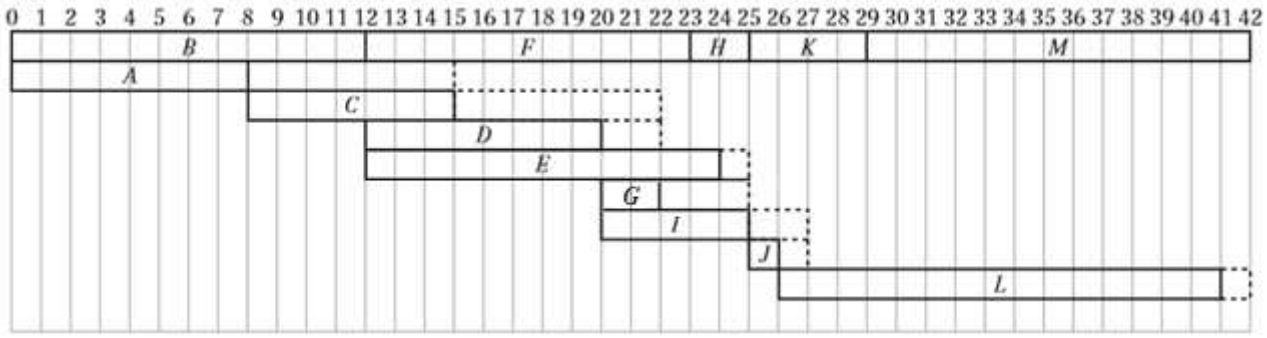



Maximum total float for $A = 15 - 8 - 0 = 7$




Maximum total float for $C = 22 - 7 - 8 = 7$

**d**




**e** Activity *I* has duration 5 hours, an earliest start time of 20 days and a latest finish time of 27 days. Activity *I* can start on day 22 for the project to be completed on time.