

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										



General Certificate of Education  
Advanced Level Examination  
January 2010

## Mathematics

## MD02

### Unit Decision 2

## Insert

### Instructions

- Insert for use in **Questions 1, 5 and 6**.
- Fill in the boxes at the top of this page.
- Fasten this insert securely to your answer book at the end of the examination.

Turn over for Figure 1

Turn over ►

Figures 1 and 2 (for use in Question 1)

Figure 1

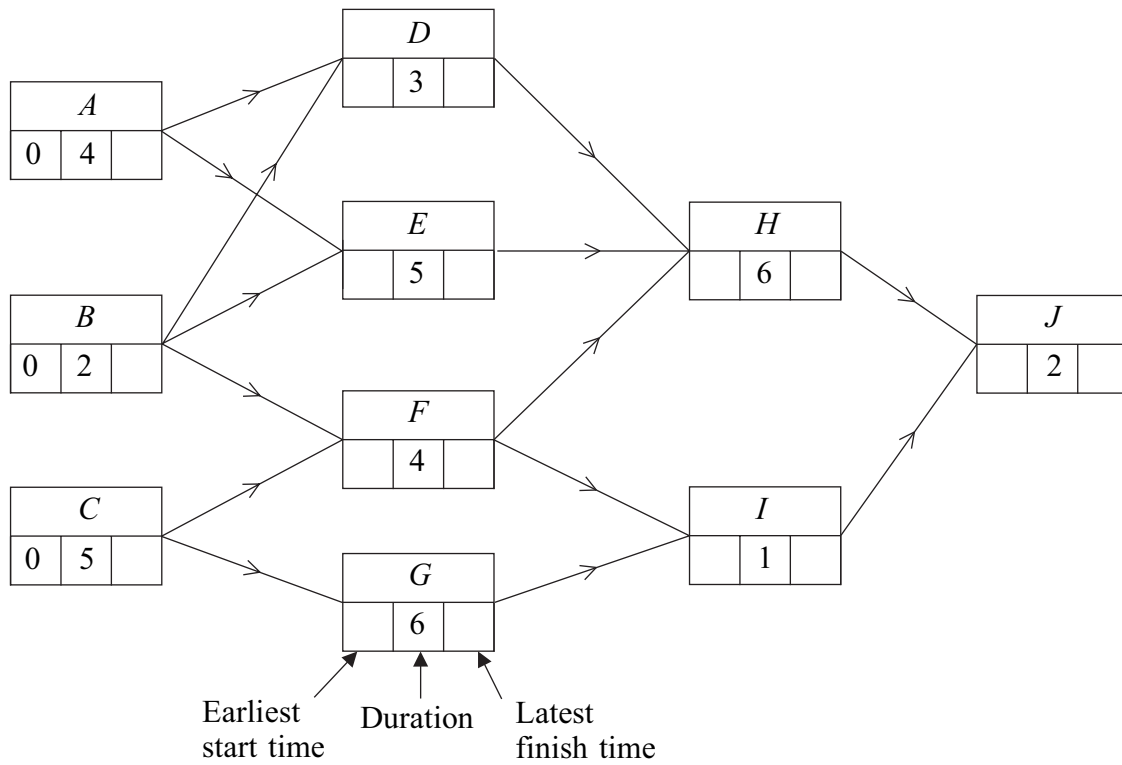


Figure 2

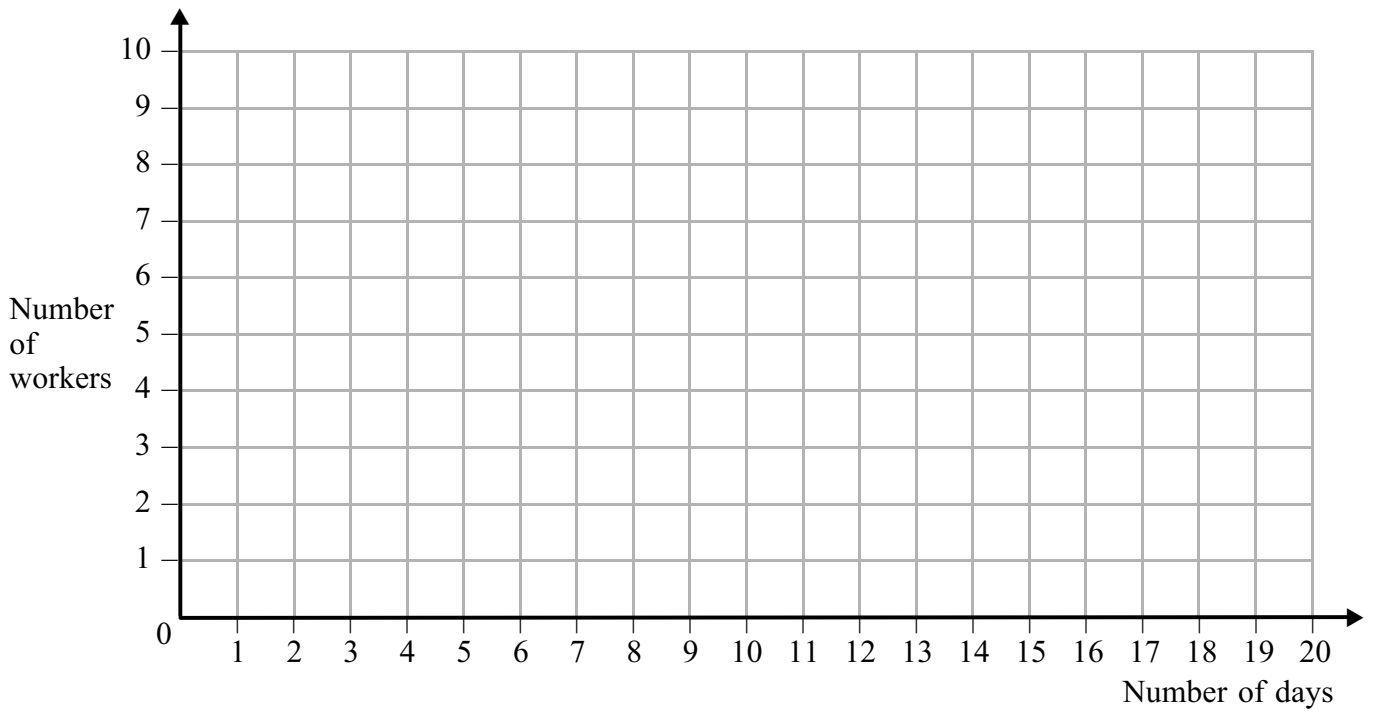


Figure 3 (for use in Question 5)

(0 in the Action column is used to represent no projects.)

Stage (month)	State (projects already done)	Action (project to do)	Calculation	Cost in thousands of pounds
August	A, B, C	0		0
	A, B	C		14
	A, C	B		10
	B, C	A		16
July	A, B	0	0 + 14	14
		C	15 + 0	15
	A, C	0		
		B		
	B, C	0		
		A		
	A	B	12 + 14	26
		C		
	B	A		
		C		
	C	A		
		B		
June	A	0		
		B		
		C		
May				

Schedule

	May	June	July	August
<b>Project</b>				

Turn over ►

Figures 4, 5, 6 and 7 (for use in Question 6)

Figure 4

Cut		Value
{S}	{A, B, C, T}	63
{S, A}	{B, C, T}	
{S, B}	{A, C, T}	
{S, C}	{A, B, T}	97
{S, A, B}	{C, T}	53
{S, A, C}	{B, T}	87
{S, B, C}	{A, T}	
{S, A, B, C}	{T}	

Figure 5

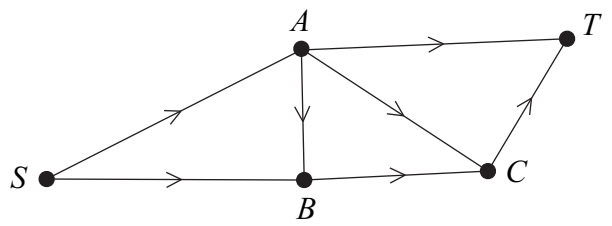
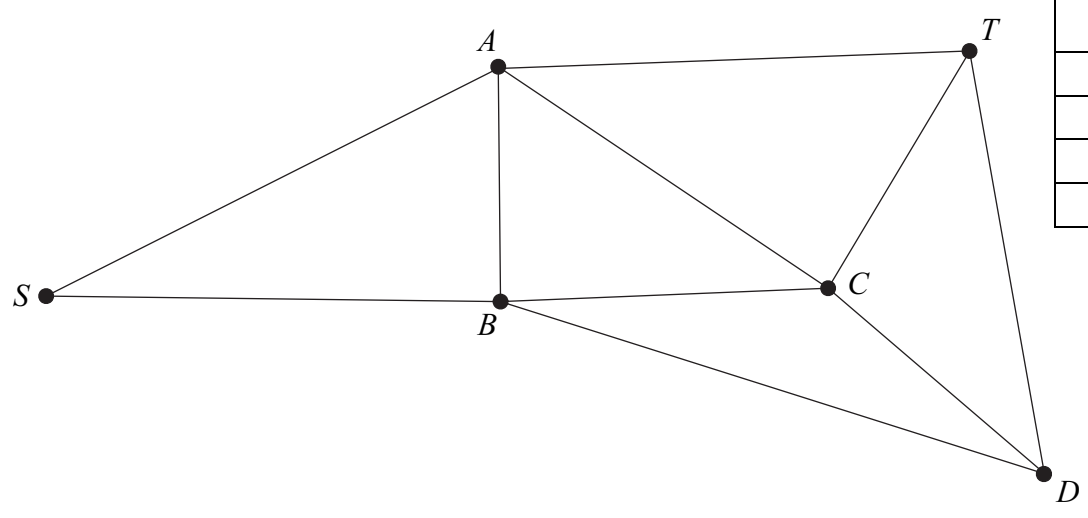
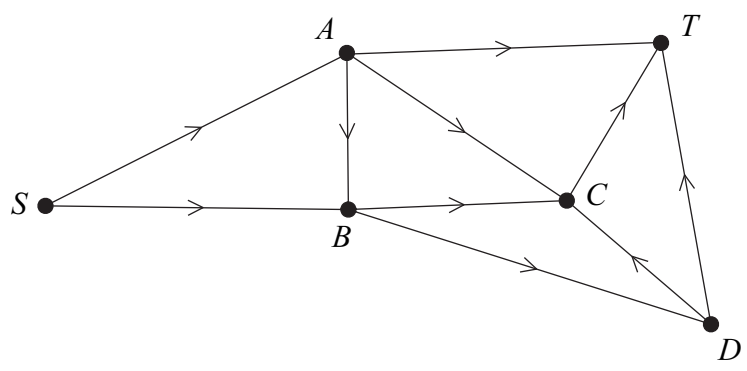


Figure 6



Path	Additional flow

Figure 7



New maximum flow is \_\_\_\_\_