

ADVANCED GCE

MATHEMATICS

Decision Mathematics 2

INSERT for Questions 1, 2 and 3

4737

Wednesday 21 January 2009

Afternoon

Duration: 1 hour 30 minutes



Candidate Forename						Candidate Surname					
Centre Number						Candidate Number					

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- This insert should be used to answer Questions **1, 2 and 3**.
- Write your answers to Questions **1, 2 and 3** in the spaces provided in this insert, and attach it to your Answer Booklet.

INFORMATION FOR CANDIDATES

- This document consists of **4** pages. Any blank pages are indicated.

1 (i)

Stage	State	Action	Working	Maximin	
1	0	0	10		
	1	0	11		
	2	0	14		
	3	0	15		
2	0	0	(12,) =		
		2	(10,) =		
	1	0	(13,) =		
		1	(10,) =		
		2	(11,) =		
	2	1	1	(9,) =	
			2	(10,) =	
			3	(7,) =	
	3	1	1	(8,) =	
			3	(12,) =	
	3	0	0	(15,) =	
			1	(14,) =	
2			(16,) =		
3			(13,) =		

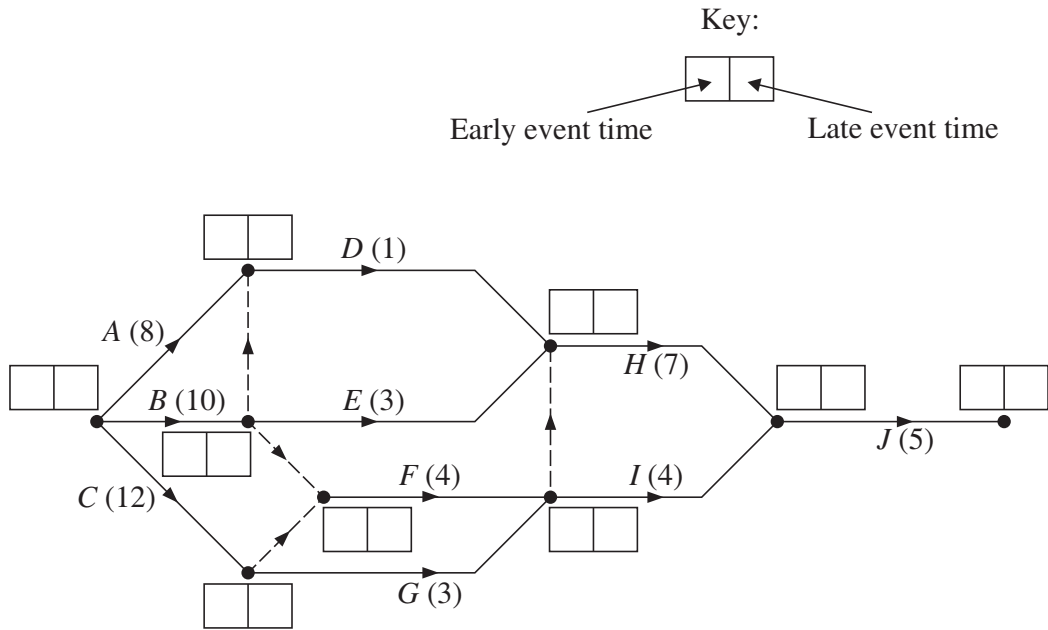
(ii) Maximin value =

Maximin route =

2 (i)

Activity	Duration (days)	Immediate predecessors
A	8	
B	10	
C	12	
D	1	
E	3	
F	4	
G	3	
H	7	
I	4	
J	5	

(ii)



Critical activities

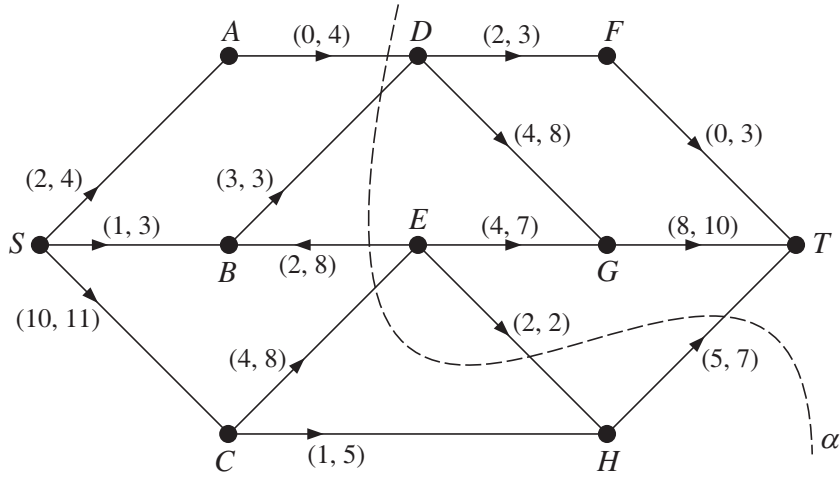
(iii)

Activity	A	B	C	D	E	F	G	H	I	J
Number of workers										

(iv) Minimum delay days

Maximum delay days

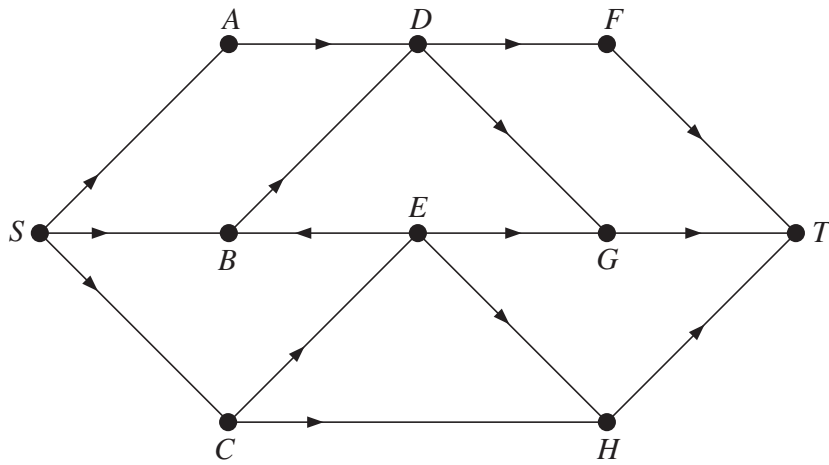
3



(i) Capacity of cut α = litres per second

(ii)

(iii)



Flow augmenting route:

Cut:

(iv)
