

Centre No.					
Candidate No.					

Paper Reference (complete below)						
6	6	8	9	/	0	1

Surname	Initial(s)
Signature	

Paper Reference(s)

6689/01

Edexcel GCE

Decision Mathematics D1

Advanced/Advanced Subsidiary

November 2002

Answer Booklet

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blank*

1. (a) *A, X, D, F*,
- (b)

(Total 4 marks)

2. (a)
- (b)
-
-

(Total 6 marks)

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blank*

3. (a) $A \bullet$ $\bullet C$ $A \bullet$ $\bullet C$
- $A \bullet$ $\bullet C$ $A \bullet$ $\bullet C$
- $A \bullet$ $\bullet C$ $A \bullet$ $\bullet C$
- $A \bullet$ $\bullet C$ $A \bullet$ $\bullet C$
- $A \bullet$ $\bullet C$ $A \bullet$ $\bullet C$

(b)

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(Total 7 marks)

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4. (a)

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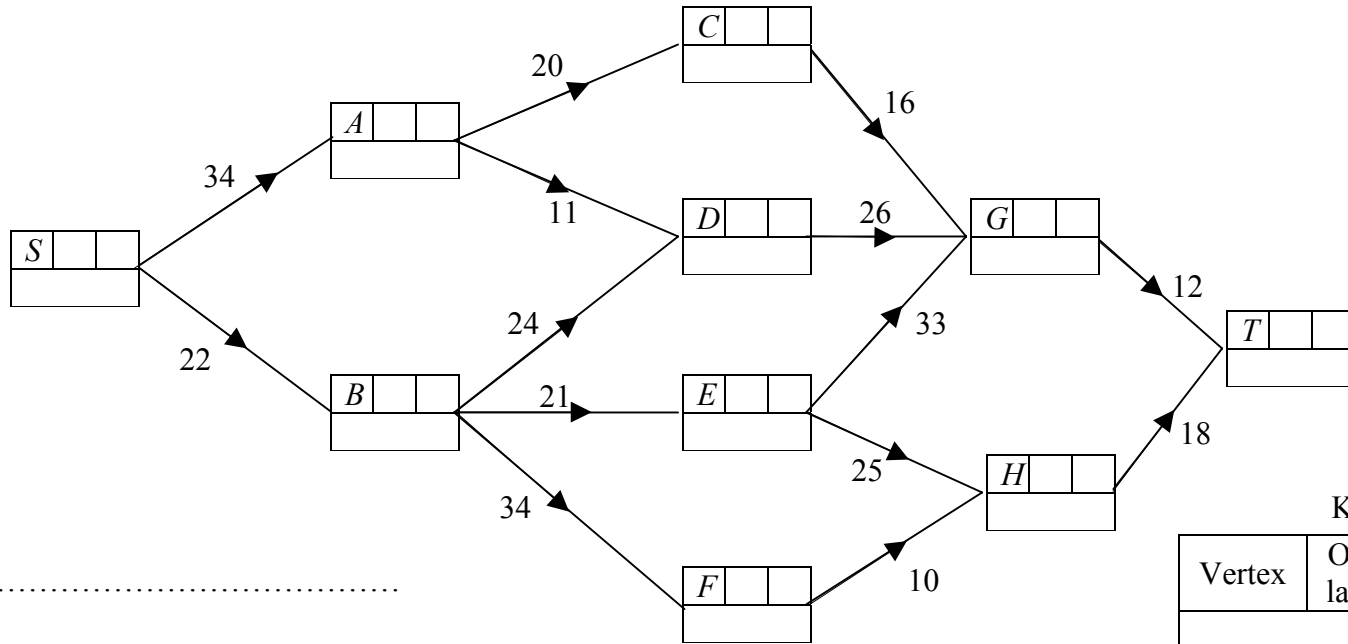
.....

Length of route:

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(Total 7 marks)

5. (a)



Route:

Length:.....

Key		
Vertex	Order of labelling	Final label
Working values		

(b)

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(c)

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(Total 10 marks)

Turn over

leave blank

*leave
blank*

6. (a)

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(b)

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(c)

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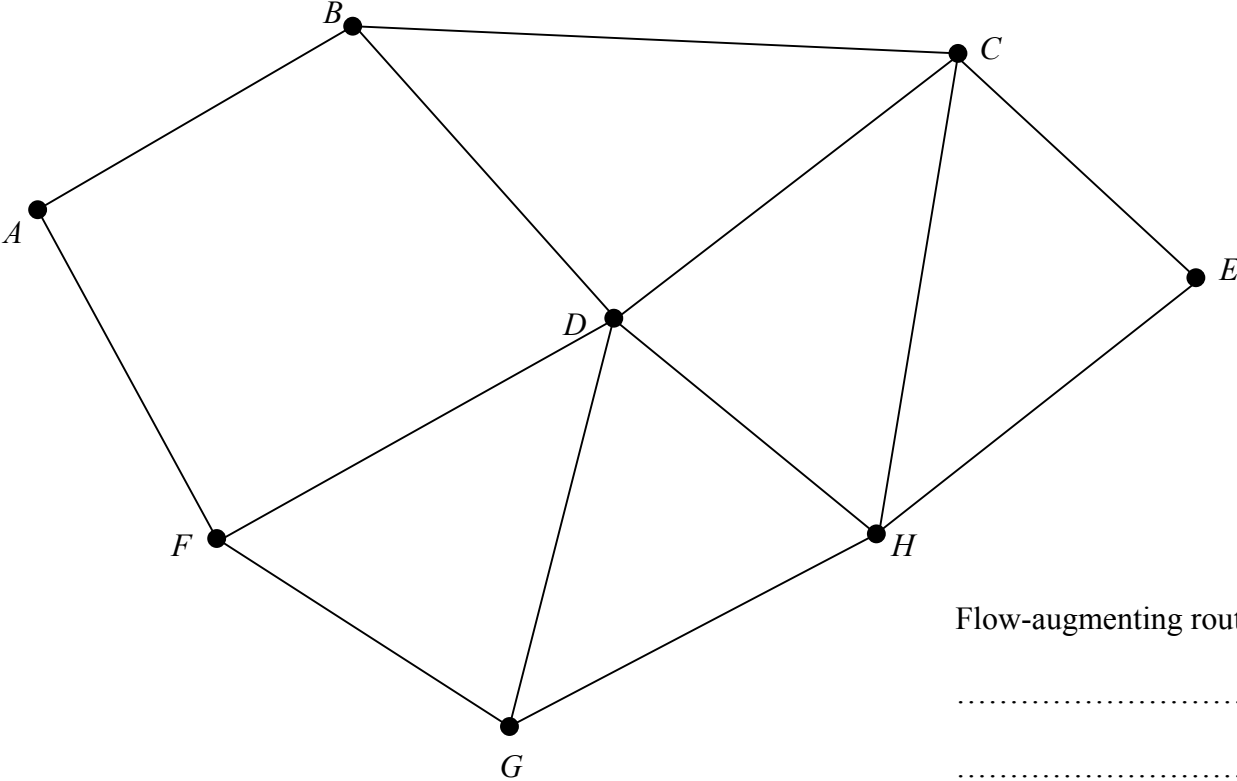
(Total 10 marks)

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TURN OVER FOR ANSWER SHEET TO QUESTION 7

- 7. (a)
- (b)
- (c)

Diagram 1

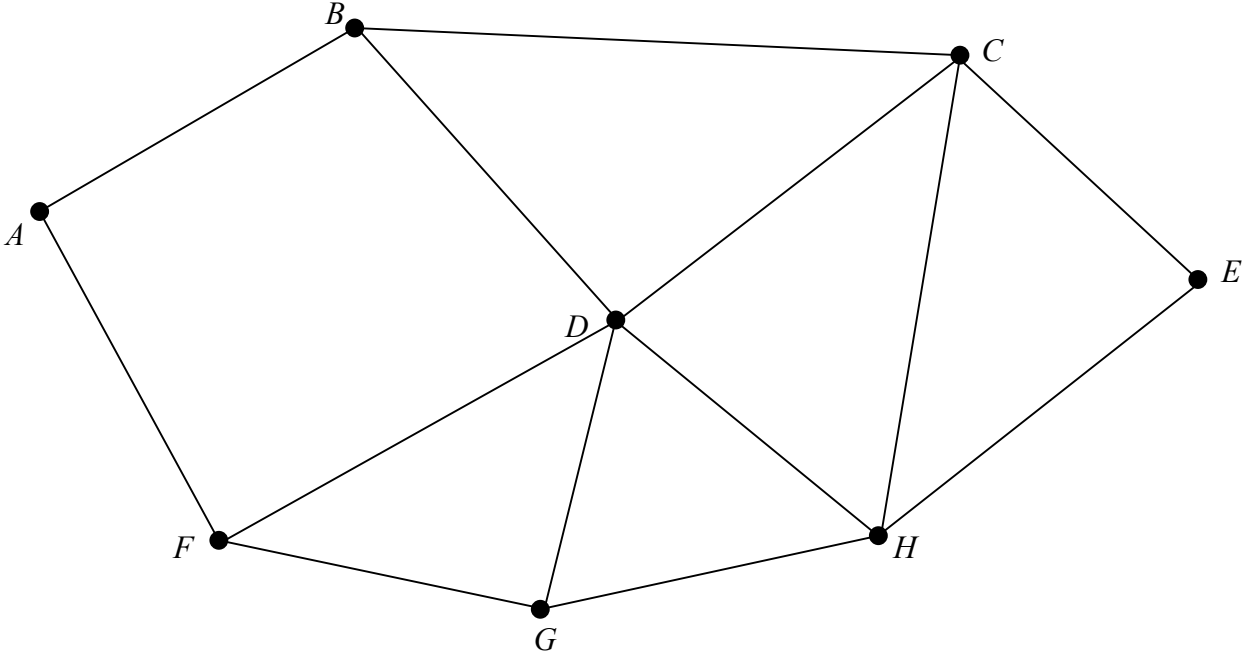


Flow-augmenting routes

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(d)

Diagram 2



Maximum flow:

(e)

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(Total 14 marks)

Turn over

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8. (a)

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(b) *You may not need to use all of these tableaux*

Basic variable	x	y	z	r	s	t	Value

Basic variable	x	y	z	r	s	t	Value

Basic variable	x	y	z	r	s	t	Value

*leave
blank*

Basic variable	x	y	z	r	s	t	Value

Basic variable	x	y	z	r	s	t	Value

Basic variable	x	y	z	r	s	t	Value

Solution

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(c)

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(Total 17 marks)

TOTAL FOR PAPER: 75 MARKS