OCR RECOGNISING ACHIEVEMENT

ADVANCED GCE

MATHEMATICS **4737**

Decision Mathematics 2

INSERT for Questions 4 and 6

Wednesday 26 January 2011
Afternoon

Duration: 1 hour 30 minutes

Candidate forename		Candidate surname	

| Centre number						Candidate number				

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- This insert should be used to answer Question **4** parts **(v)** and **(vi)** and Question **6**.
- Write your answers to Question **4** parts **(v)** and **(vi)** and Question **6** in the spaces provided in this insert and attach it to your answer booklet.
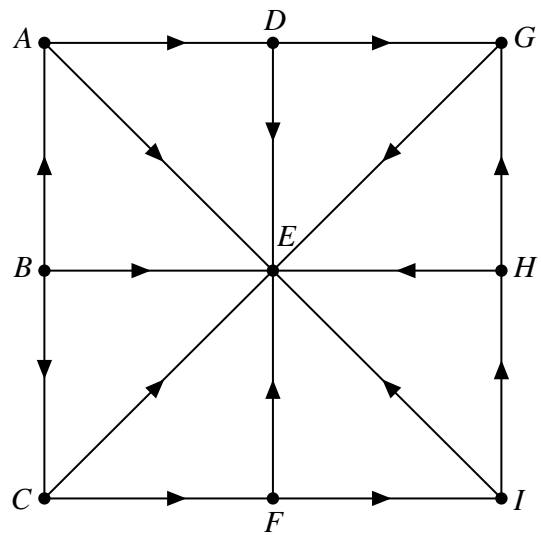
INFORMATION FOR CANDIDATES

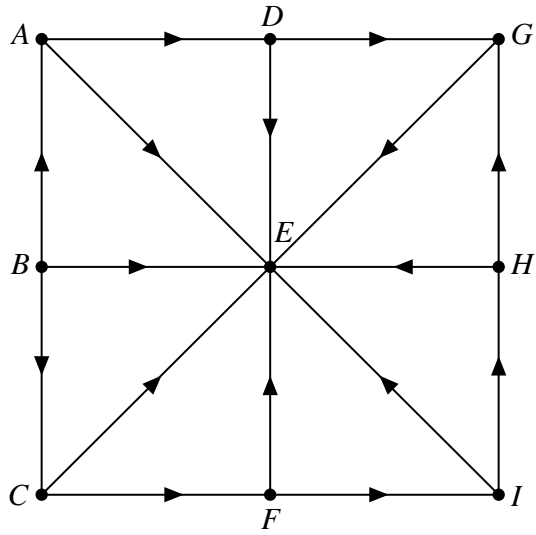- This document consists of **8** pages. Any blank pages are indicated.

OCR is an exempt Charity

Turn over

4   **(v)**

Minimum flow

Maximum flow

4737 Ins Jan11
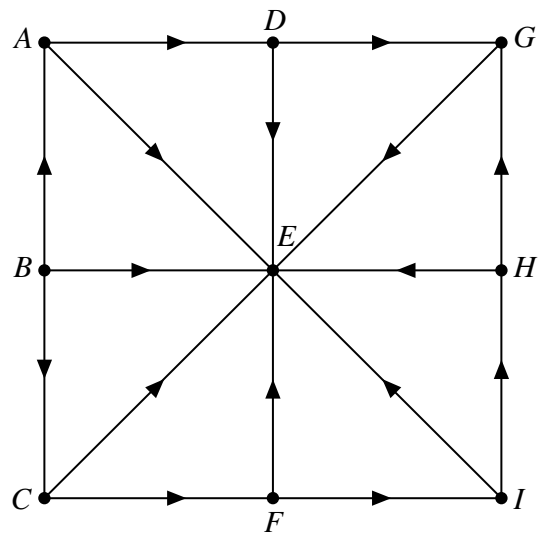
(vi) (a)

(b) ....

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....

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[Answer Question 6 overleaf.]

6 **(i)** ....

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(ii) ....

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(iii) ....

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(iv) The table for this part of the question is on the opposite page.

Quickest route ....

Minimum journey time ....minutes

Stage	State	Action	Working	Suboptimal minimum
4	1(234)	0	10	10
	2(134)	0	14	14
	3(124)	0	12	12
	4(123)	0	17	17
3	1(23)	4(123)	17 + 6 = 23	23
	1(24)	3(124)	12 + 2 = 14	14
	1(34)	2(134)	14 + 3 = 17	17
	2(13)	4(123)	17 + 4 = 21	21
	2(14)	3(124)	12 + 2 = 14	14
	2(34)	1(234)	10 + 3 = 13	13
	3(12)	4(123)	17 + 3 = 20	20
	3(14)	2(134)	14 + 2 = 16	16
	3(24)	1(234)	10 + 2 = 12	12
	4(12)	3(124)	12 + 3 = 15	15
	4(13)	2(134)	14 + 4 = 18	18
	4(23)	1(234)	10 + 6 = 16	16
2	1(2)	3(12) 4(12)	20 + 2 = 22 15 + 6 = 21	21
	1(3)	2(13) 4(13)	21 + 3 = 24 18 + 6 = 24	24
	1(4)			
	2(1)			
	2(3)			
	2(4)			
	3(1)			
	3(2)			
	3(4)			
	4(1)			
	4(2)			
	4(3)			
1	1			
	2			
	3			
	4			
0	0	1 2 3 4		

6

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