ADVANCED SUBSIDIARY GCE

MATHEMATICS (MEI)
Decision Mathematics 1

4771

PRINTED ANSWER BOOK

Monday 25 January 2010
Morning

Duration: 1 hour 30 minutes

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

INSTRUCTIONS TO CANDIDATES

These instructions are the same on the Printed Answer Book and the Question Paper.

*   Write your name clearly in capital letters, your Centre Number and Candidate Number in the spaces provided on the Printed Answer Book.
*   **The questions are on the inserted Question Paper.**
*   **Write your answer to each question in the space provided in the Printed Answer Book.** If you need more space for an answer use a 4-page answer book; label your answer clearly. Write your Centre Number and Candidate Number on the 4-page answer book and attach it securely to the Printed Answer Book.
*   Use black ink. Pencil may be used for graphs and diagrams only.
*   Read each question carefully and make sure that you know what you have to do before starting your answer.
*   Answer **all** the questions.
*   Do **not** write in the bar codes.
*   You are permitted to use a graphical calculator in this paper.
*   Final answers should be given to a degree of accuracy appropriate to the context.

INFORMATION FOR CANDIDATES

This information is the same on the Printed Answer Book and the Question Paper.

*   The number of marks is given in brackets **[ ]** at the end of each question or part question on the Question Paper.
*   You are advised that an answer may receive **no marks** unless you show sufficient detail of the working to indicate that a correct method is being used.
*   The total number of marks for this paper is **72**.
*   The Printed Answer Book consists of **12** pages. The Question Paper consists of **8** pages. Any blank pages are indicated.
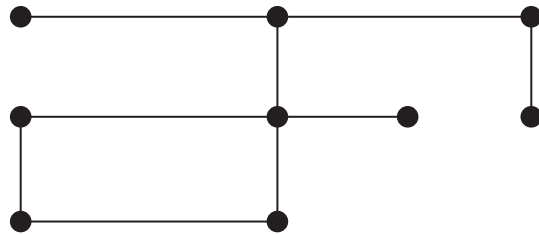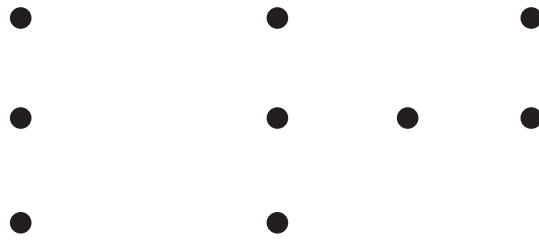
1 **(i)** & **(ii)**
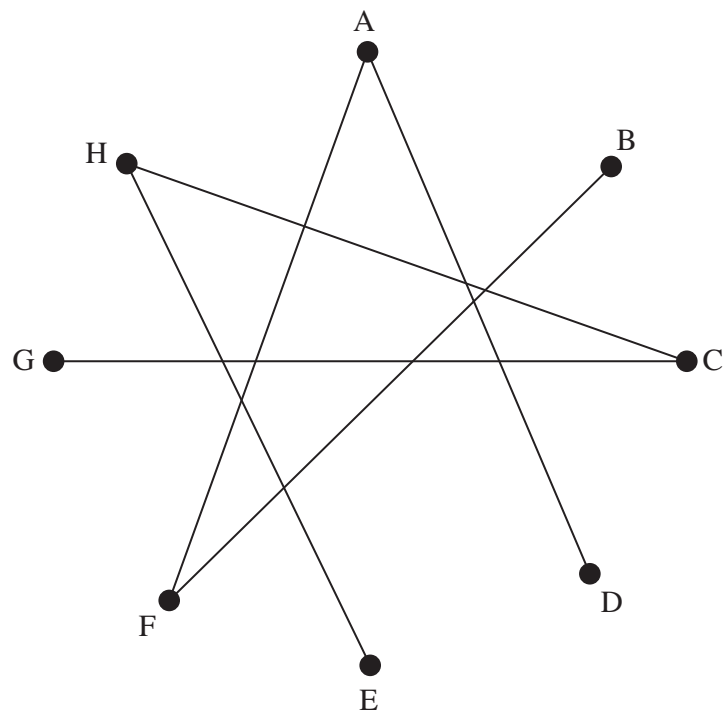
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Critical activities: ....

Turn over

2 **(i)**

(ii)

3. **(i)**

    (ii)

    (iii)

           Number of arcs added = ...

    (iv)

4 **(i)**

(ii)
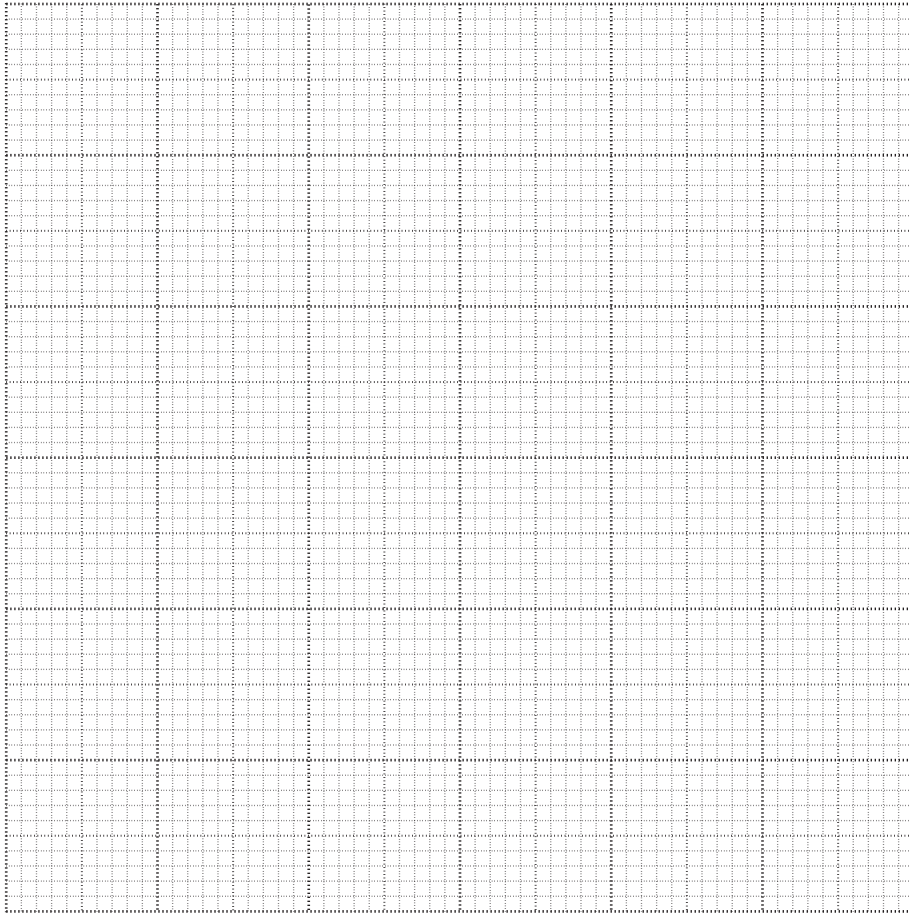
(iii)
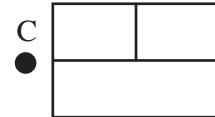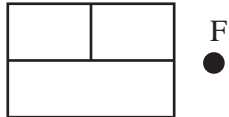
(iv)

(v)

(vi)

SPARE GRAPH PAPER FOR QUESTION 4
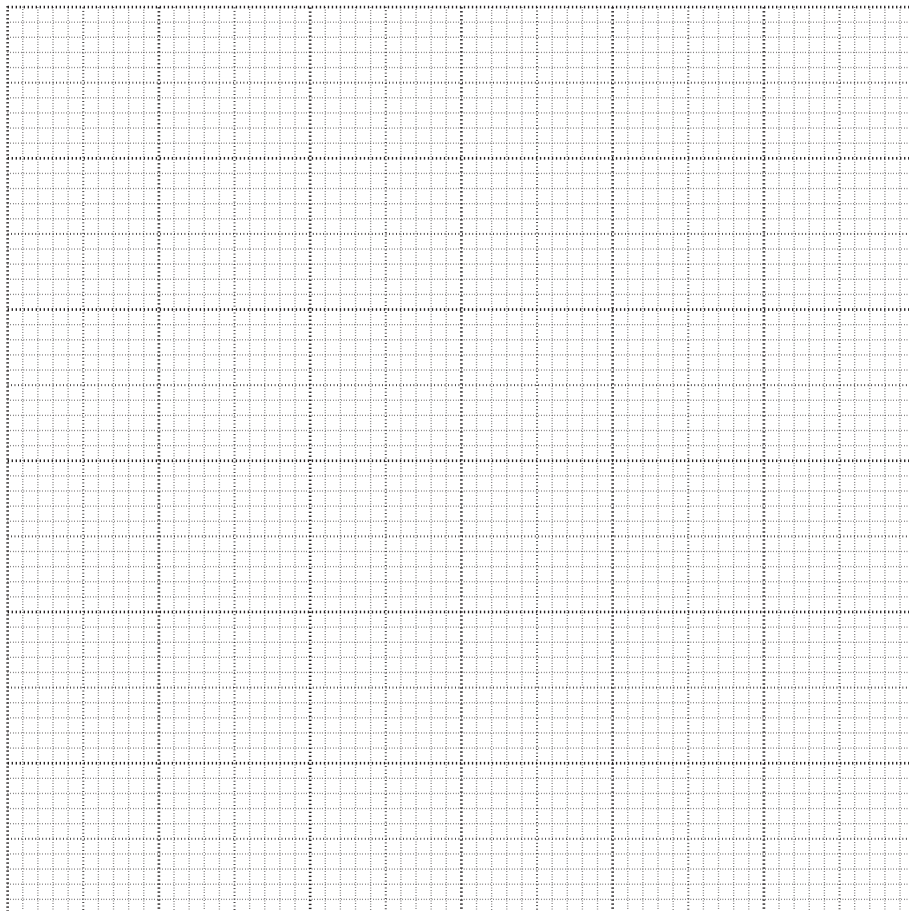
5   (i) & (ii)
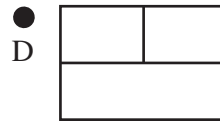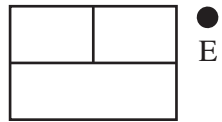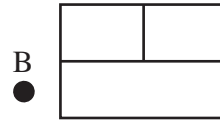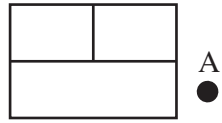
Shortest route from A to F: ....

Length of shortest route: .... miles

(iii)

A ●   B ●

F ●   ● C

● ●
E   D
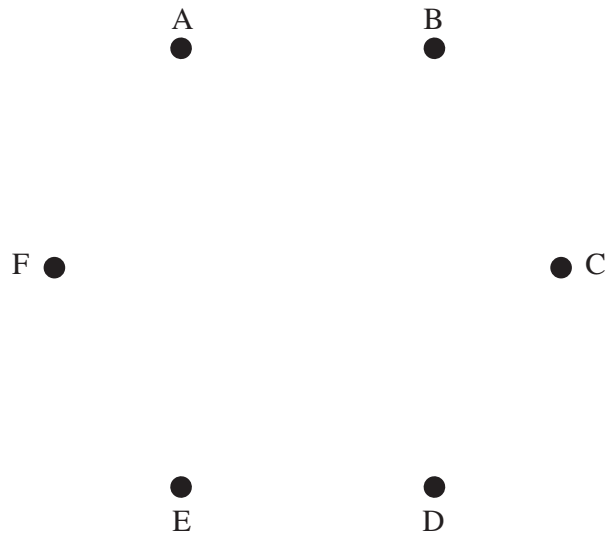
Order in which you selected arcs: ....

Total length of connector = ... miles

(iv) (*A*)

(*B*)

6 **(i)**

Random digits for parts **(ii)** and **(iii)**

9 1 3 8 0 2 7 0 1 4 4 8 9 0 3 4 3 4 6 1 9 5 3 4 1

(ii)

apple no.	random number	fall?
1		
2		
3		
4		
5		
6		

Number of apples falling during day 1 = ...

(iii)

The last apple falls during day ....

Random digits for part **(iv)**

9 1 3 8 0 2 7 0 1 4 4 8 9 0 3 4 3 4 6 1 9 5 3 4 1

(iv)

The last apple falls or is picked during day ....

(v)