



Oxford Cambridge and RSA

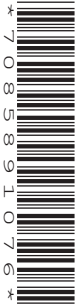
AS Level Further Mathematics B (MEI)

Y413/01 Modelling with Algorithms

Printed Answer Booklet

Thursday 17 May 2018 – Afternoon

Time allowed: 1 hour 15 minutes



You must have:

- Question Paper Y413/01 (inserted)
- Formulae Further Mathematics B (MEI)

You may use:

- a scientific or graphical calculator



First name										
Last name										
Centre number						Candidate number				

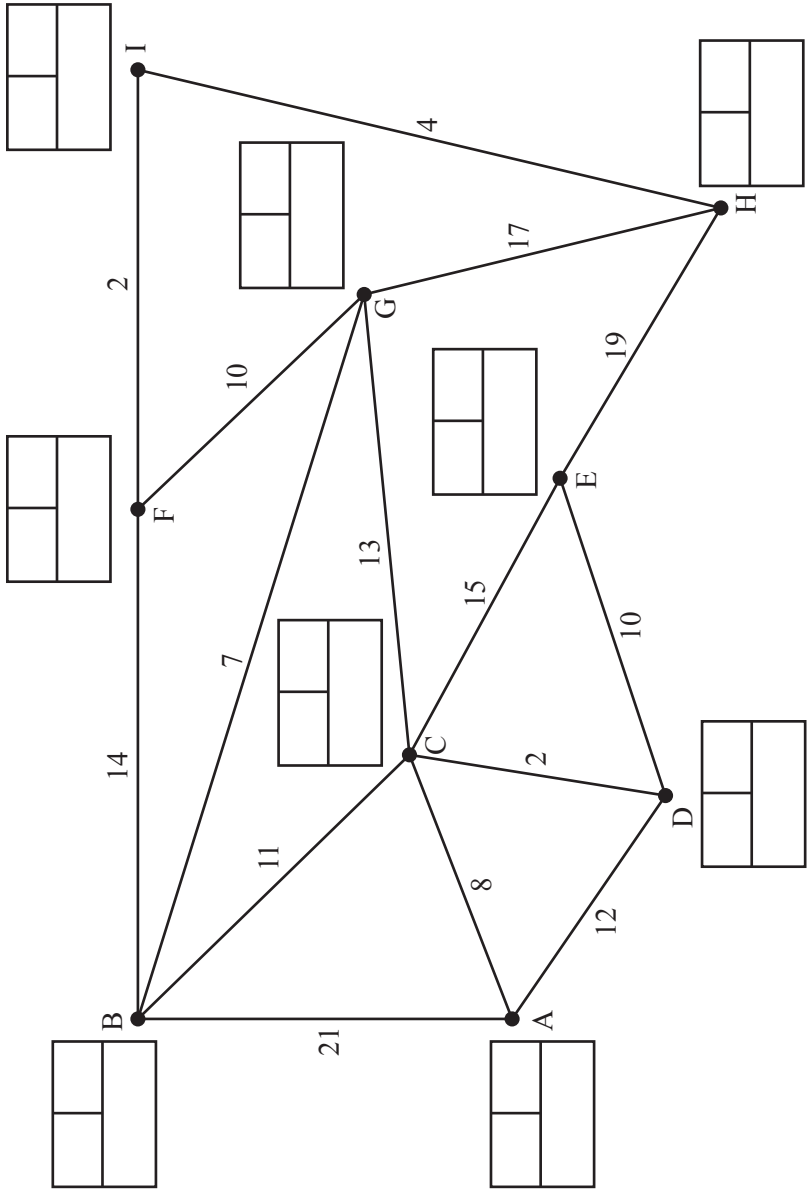
INSTRUCTIONS

- The Question Paper will be found inside the Printed Answer Booklet.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Complete the boxes provided on the Printed Answer Booklet with your name, centre number and candidate number.
- Answer **all** the questions.
- **Write your answer to each question in the space provided in the Printed Answer Booklet.** If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.
- Do **not** write in the barcodes.
- You are permitted to use a scientific or graphical calculator in this paper.
- Final answers should be given to a degree of accuracy appropriate to the context.

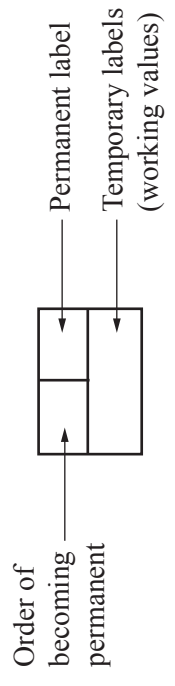
INFORMATION

- 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 used. You should communicate your method with correct reasoning.
- The Printed Answer Booklet consists of **12** pages. The Question Paper consists of **12** pages.

1(i)



Key:

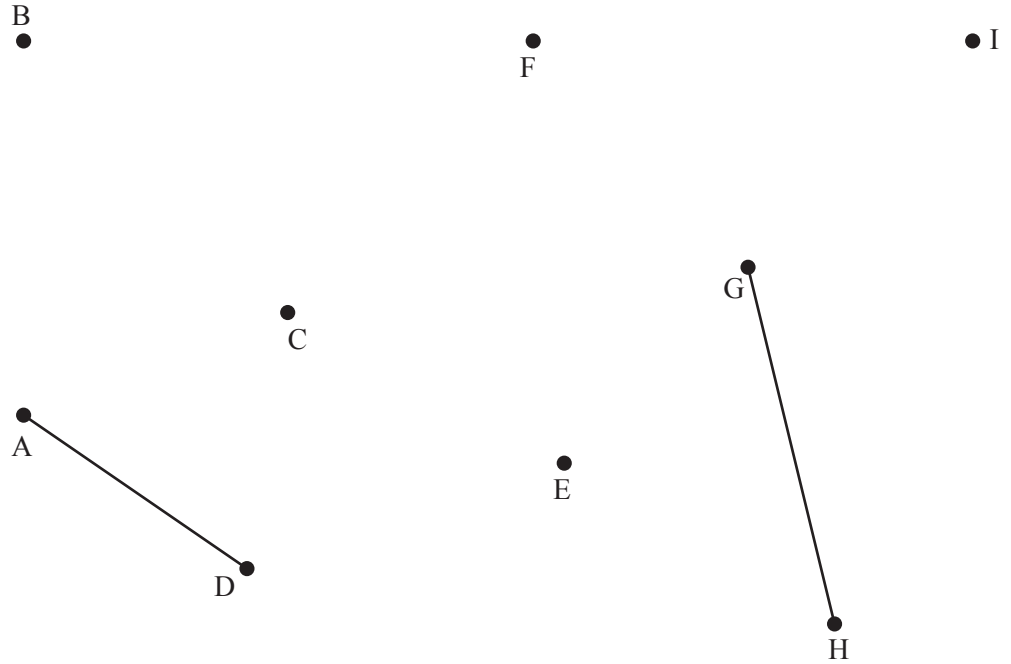


Do not cross out your temporary labels

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1(ii)

- CD = 2
- FI = 2
- HI = 4
- BG = 7
- AC = 8
- FG = 10
- DE = 10
- BC = 11
- CG = 13
- BF = 14
- CE = 15
- EH = 19
- AB = 21



Total length of arcs in spanning tree =

1(iii)

2(i)	

2(ii)(A)	

2(ii)(B)	

2(iii)	

2(iv)	

3(i)	12 34 15 23 10 25
3(ii)	
3(iii)	

4(i)(A)	
4(i)(B)	
4(ii)(A)	
4(ii)(B)	
4(iii)(A)	
4(iii)(B)	
4(iv)(A)	
4(iv)(B)	

5(i)																							
5(ii)(A)	<table border="1" data-bbox="550 566 1157 1167"> <thead> <tr> <th data-bbox="550 566 885 622">Activity</th> <th data-bbox="885 566 1157 622">Duration</th> </tr> </thead> <tbody> <tr><td data-bbox="550 622 885 678">A</td><td data-bbox="885 622 1157 678"></td></tr> <tr><td data-bbox="550 678 885 734">B</td><td data-bbox="885 678 1157 734"></td></tr> <tr><td data-bbox="550 734 885 790">C</td><td data-bbox="885 734 1157 790"></td></tr> <tr><td data-bbox="550 790 885 846">D</td><td data-bbox="885 790 1157 846"></td></tr> <tr><td data-bbox="550 846 885 902">E</td><td data-bbox="885 846 1157 902"></td></tr> <tr><td data-bbox="550 902 885 958">F</td><td data-bbox="885 902 1157 958"></td></tr> <tr><td data-bbox="550 958 885 1014">G</td><td data-bbox="885 958 1157 1014"></td></tr> <tr><td data-bbox="550 1014 885 1070">H</td><td data-bbox="885 1014 1157 1070"></td></tr> <tr><td data-bbox="550 1070 885 1126">I</td><td data-bbox="885 1070 1157 1126"></td></tr> <tr><td data-bbox="550 1126 885 1167">J</td><td data-bbox="885 1126 1157 1167"></td></tr> </tbody> </table>	Activity	Duration	A		B		C		D		E		F		G		H		I		J	
Activity	Duration																						
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G																							
H																							
I																							
J																							
5(ii)(B)																							
5(iii)																							

6(ii)

6(iii)

P	x	y	z	s_1	s_2	s_3	RHS

P	x	y	z	s_1	s_2	s_3	RHS

6(iv)	
6(v)	
6(vi)	

