

Candidate surname

Other names

**Pearson Edexcel
Level 3 GCE**

Centre Number

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Candidate Number

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**AS and A level Further Mathematics
Decision Mathematics 1**

**Practice Paper
Dijkstra and Floyd**

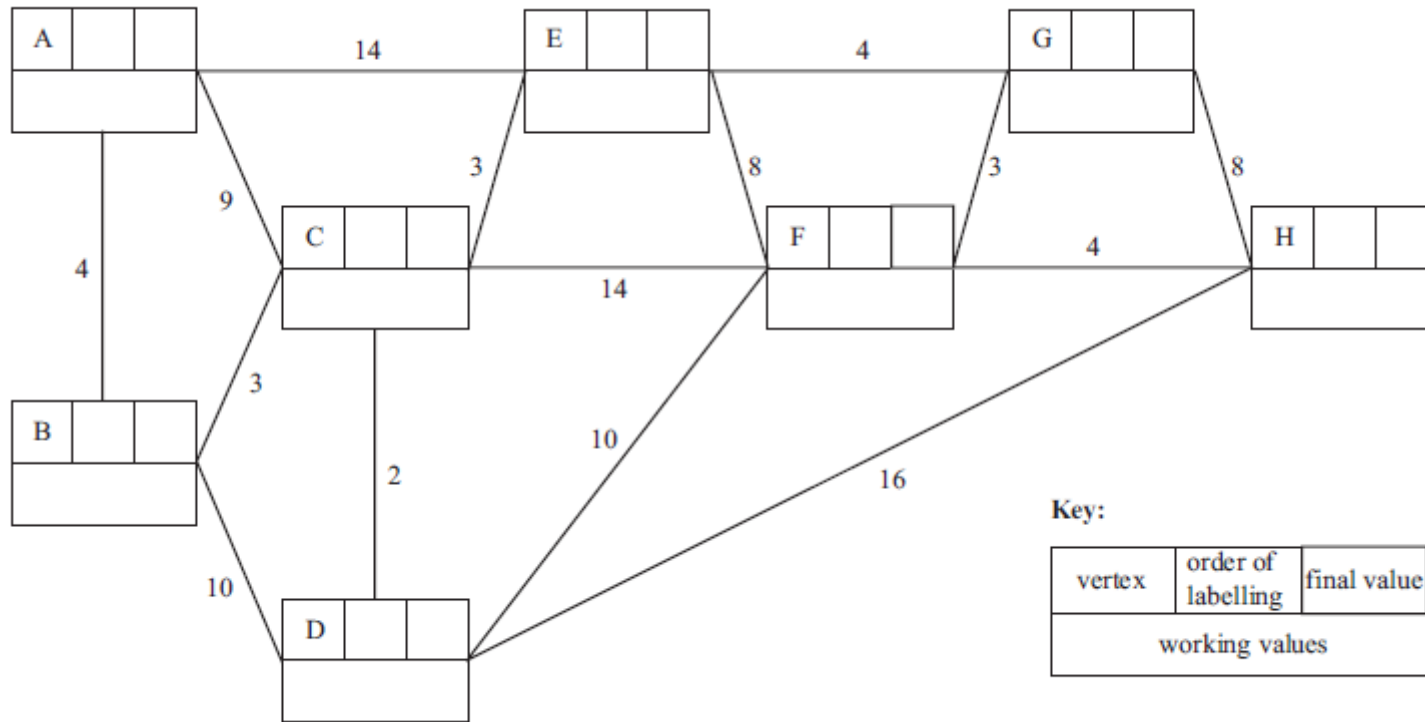
Answer Book

Do not return the question paper with the answer book.

Total Marks

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1. (a)



Shortest distance A to H

Question 1 continued

(b)

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(c)

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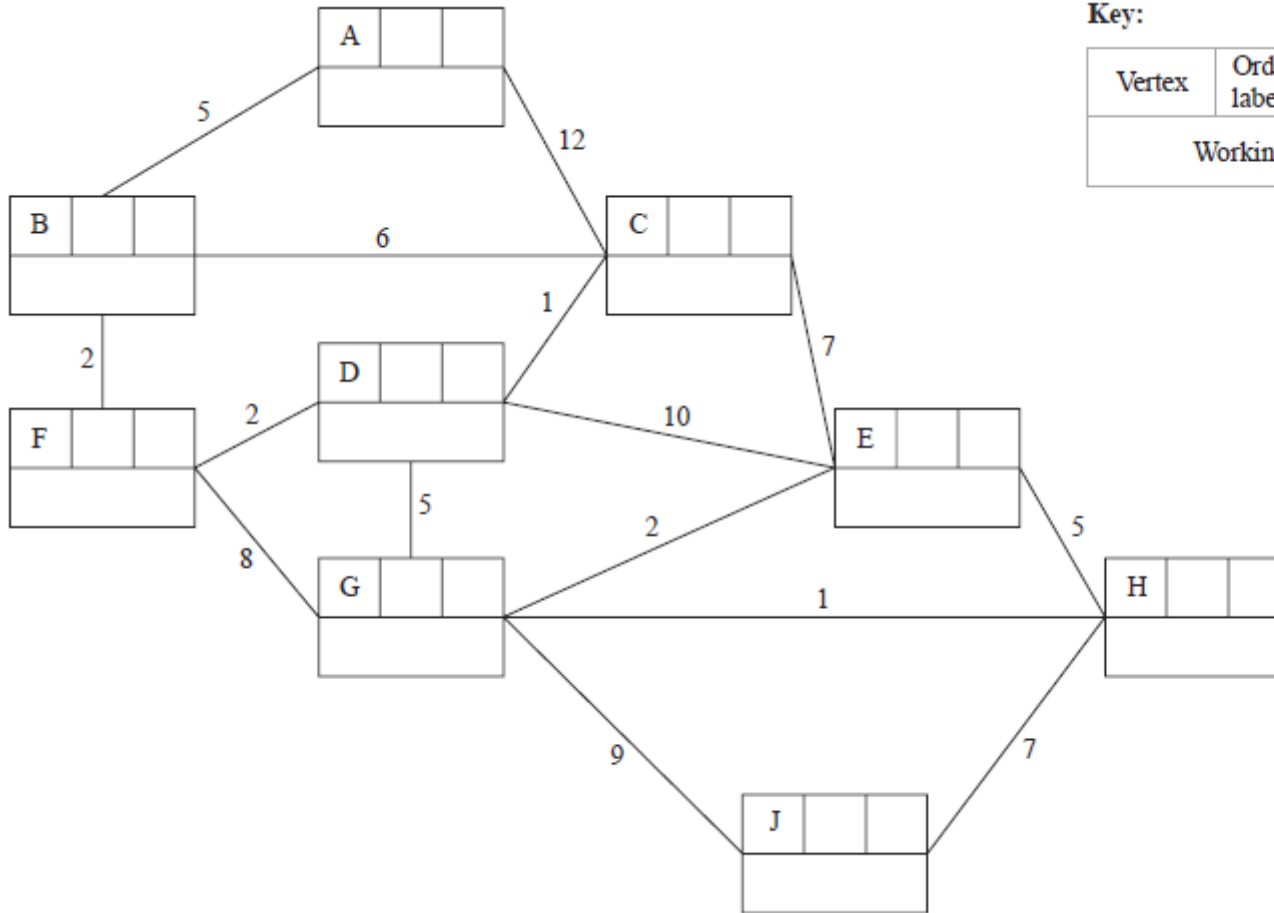
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(Total 8 marks)

2.



Key:

Vertex	Order of labelling	Final value
Working values		

Shortest route

Length of shortest route

Question 2 continued

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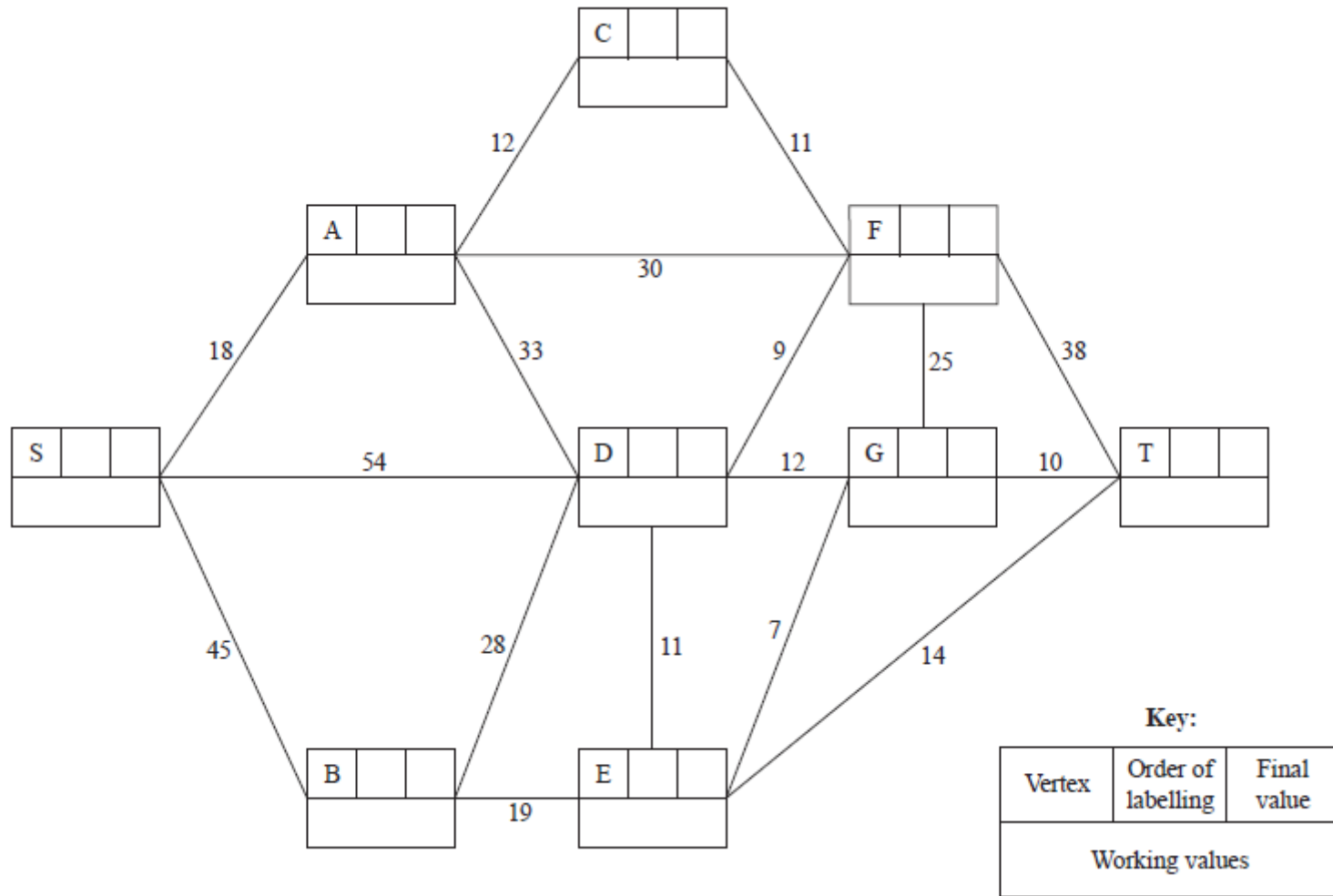
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(Total 10 marks)

3. (a)



Question 3 continued

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Quickest route from S to T

Time of quickest route from S to T

(b)

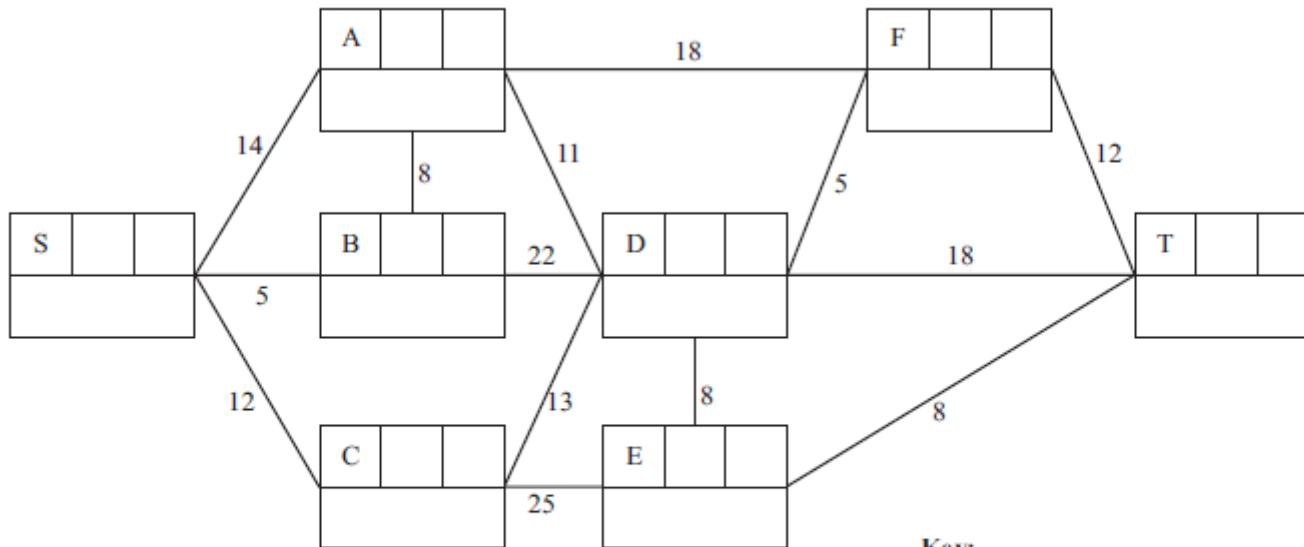
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(Total 9 marks)

4. (a)

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(b)



Key:

Vertex	Order of labelling	Final value
Working value		

Shortest path

Length of shortest path

Question 4 continued

(c)

Shortest distance from S to F

(d)

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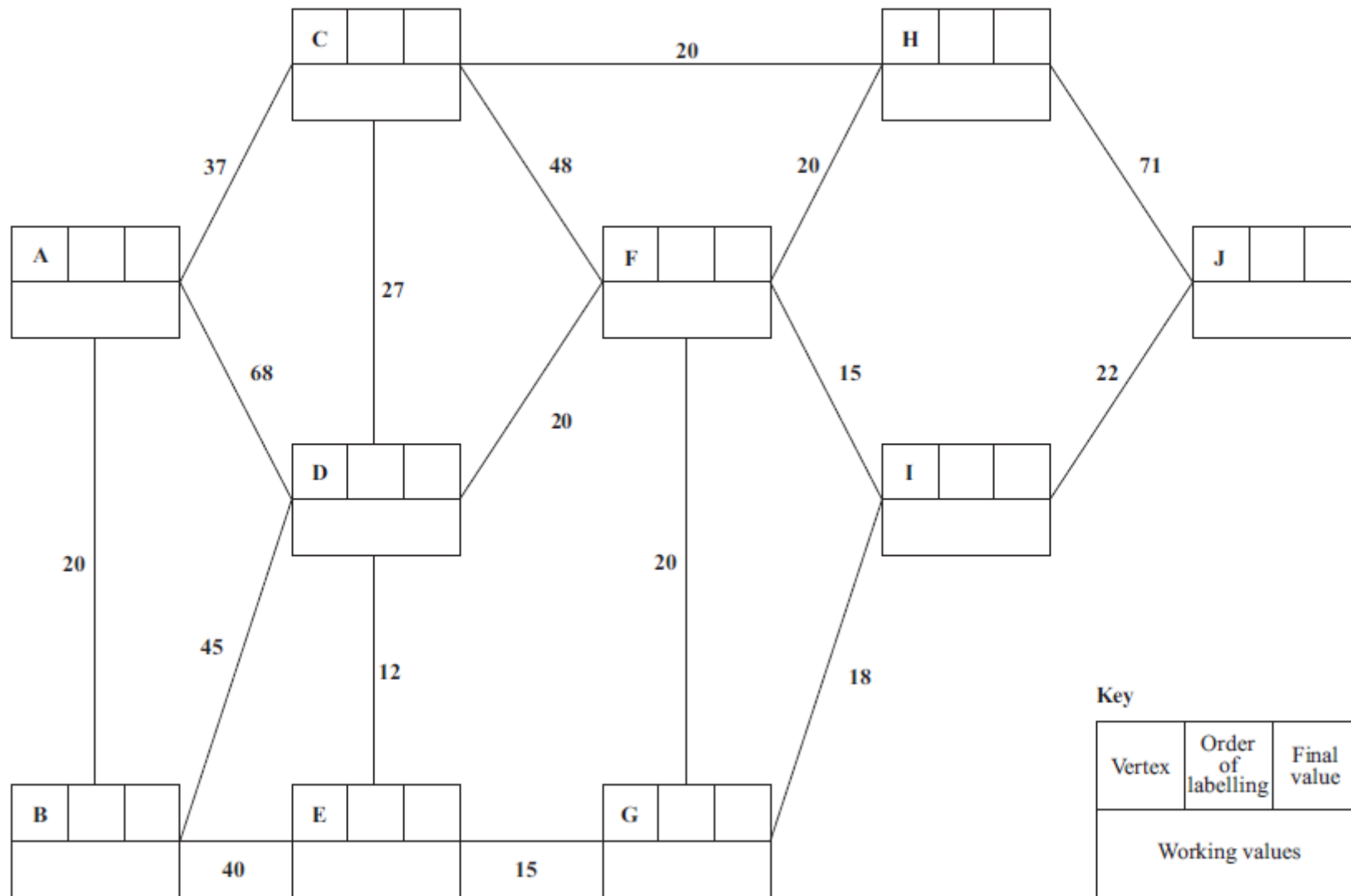
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(Total 11 marks)

5.



Key

Vertex	Order of labelling	Final value
Working values		

Question 5 continued

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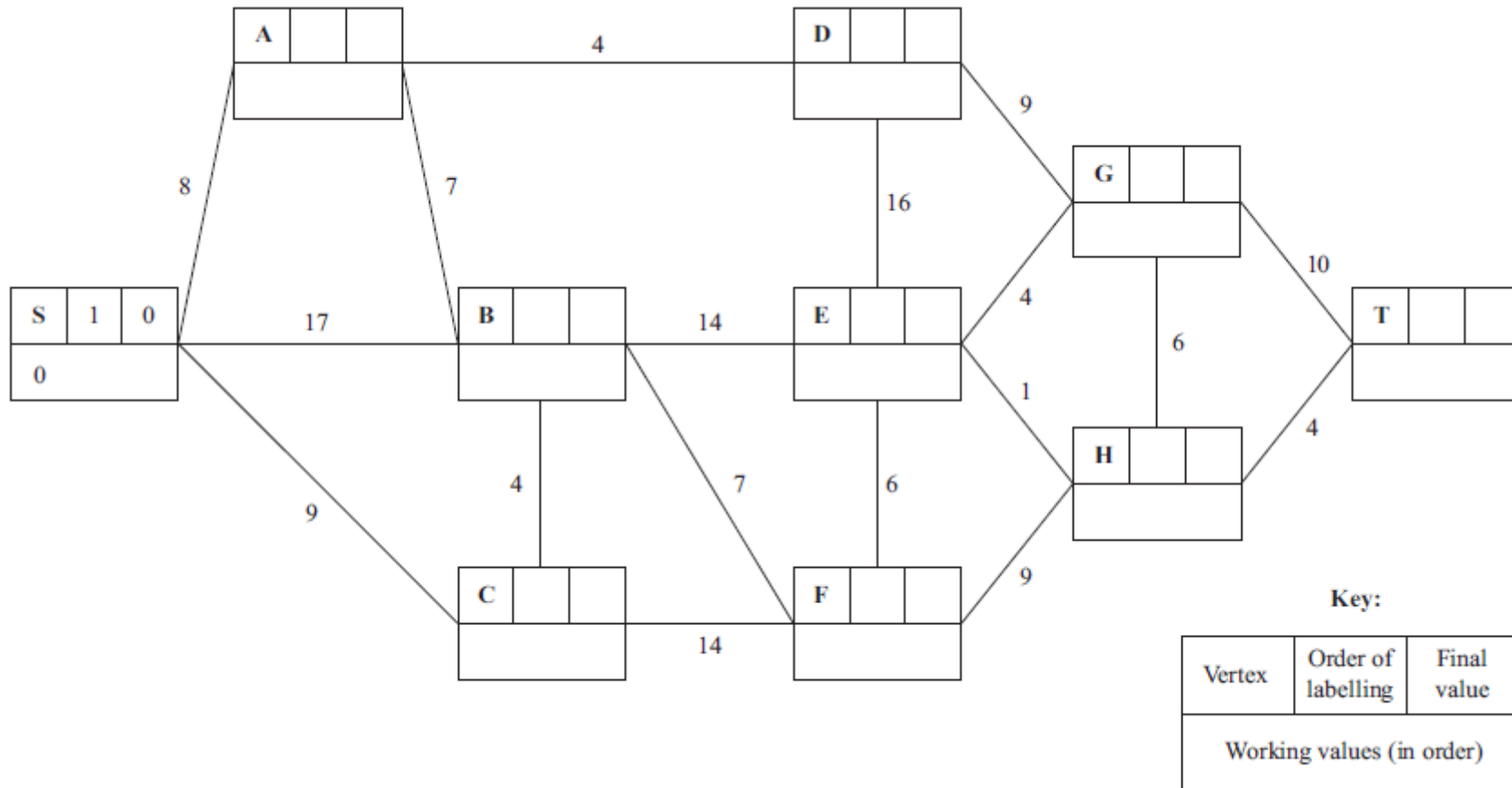
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(Total 9 marks)



6. (a)



Question 6 continued

Shortest path from S to T

Length of shortest path from S to T

(b)

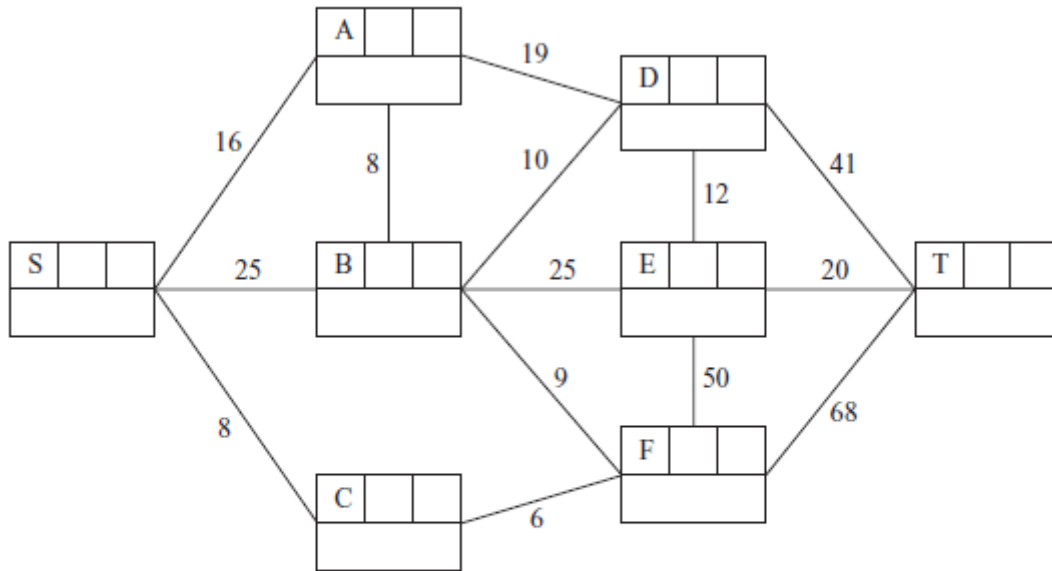
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Shortest path from S to T via F

Length of the shortest path from S to T via F

(Total 8 marks)

7.



Key:

Vertex	Order of labelling	Final value
Working values		

Shortest route

Length of shortest route

Question 7 continued

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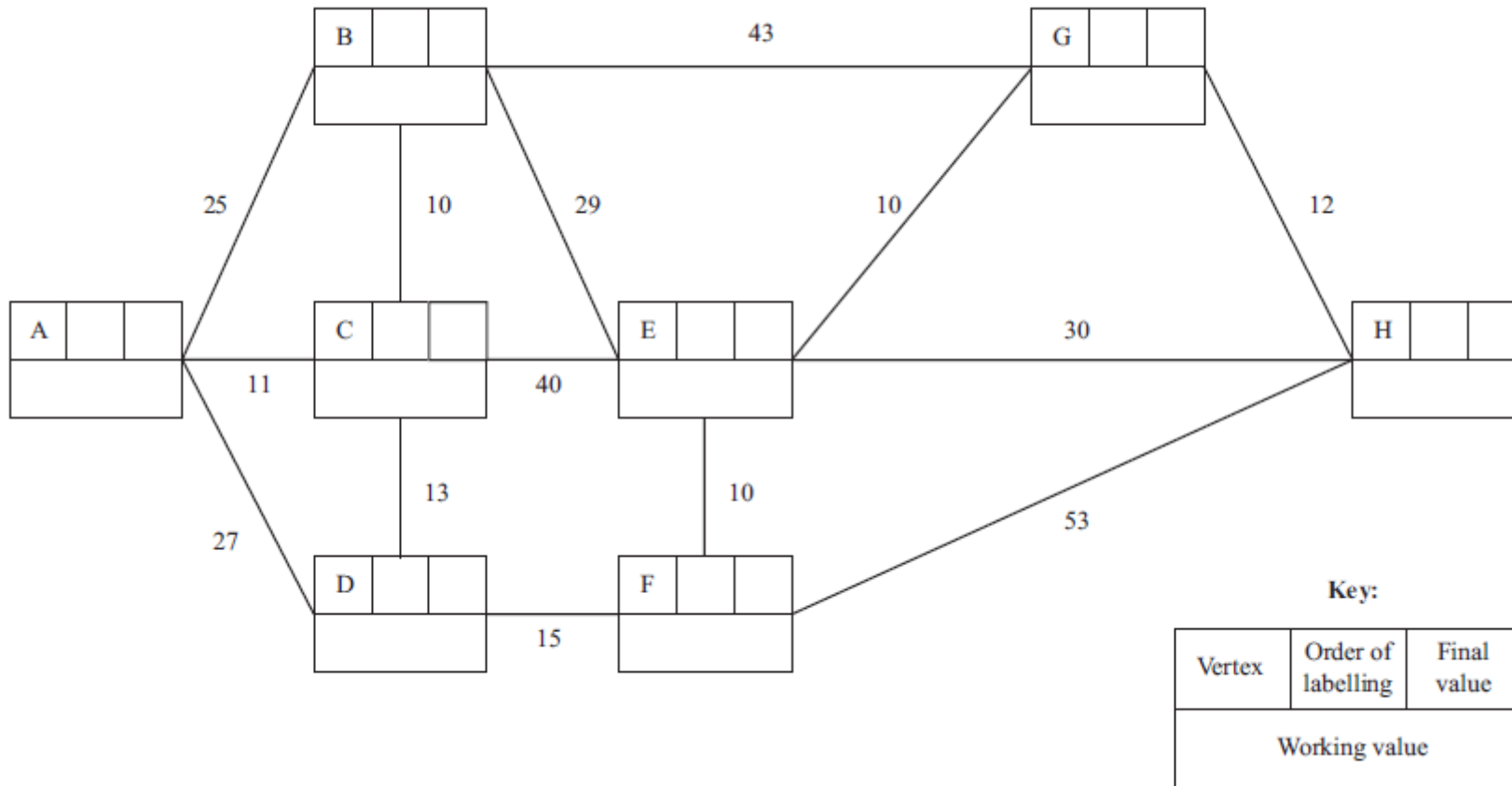
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(Total 10 marks)

8.



Question 8 continued

Shortest route

Length of shortest route

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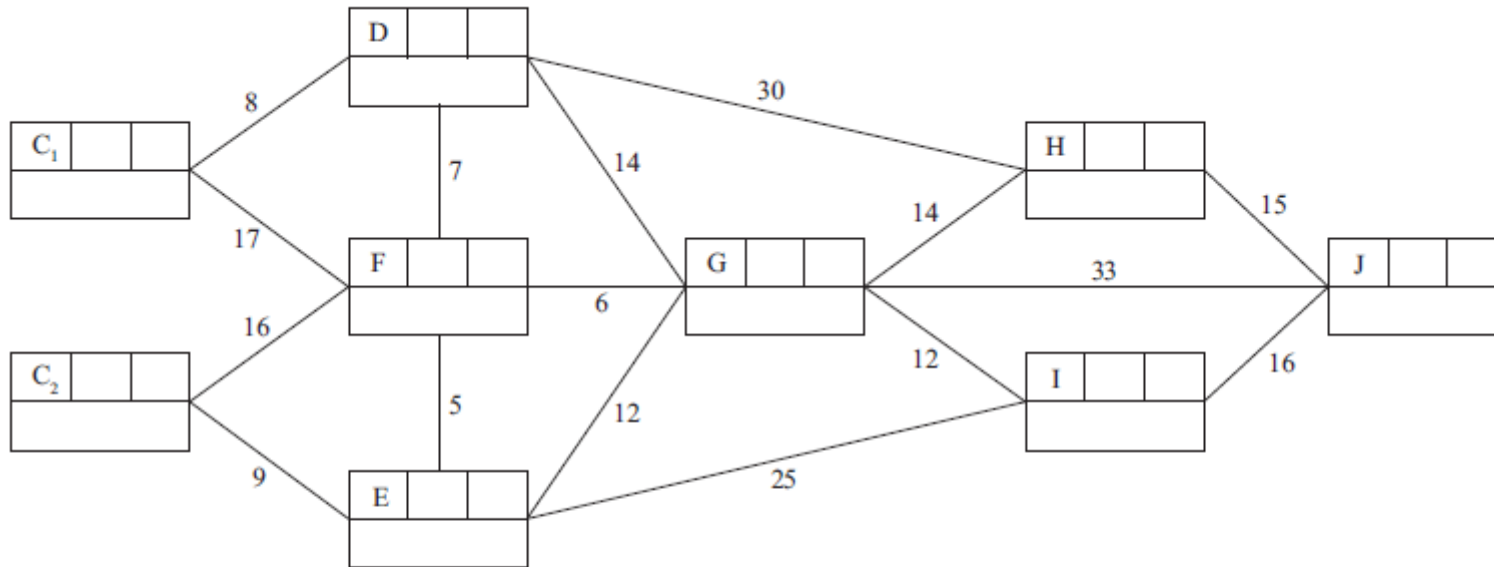
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(Total 10 marks)

9.



Key

Vertex	Order of labelling	Final value
Working values		

Question 9 continued

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Shortest route

Length of shortest route

(Total 7 marks)

TOTAL FOR PAPER: 82 MARKS