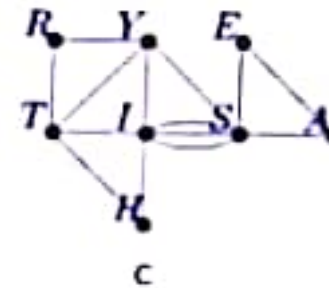
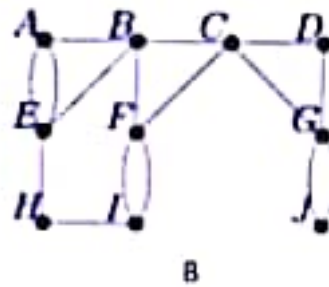
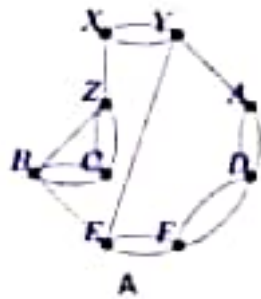




Which of these do not have Euler Circuits?



Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above



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Question 4

Not yet answered

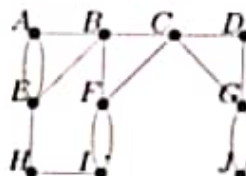
Marked out of 1.00

Flag question

Which of these graphs have Hamiltonian Paths?



A



B



C

Select one:

- ☐ A only
- ☐ A and B only
- ☐ B and C only
- ☐ All graphs
- ☐ None of the above



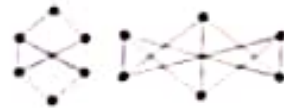
Question 8

Not yet answered

Marked out of
1.00

Flag question

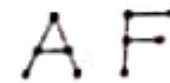
Which of the following pairs are isomorphic?



A



B

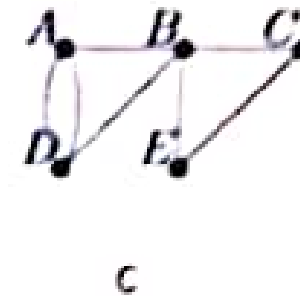
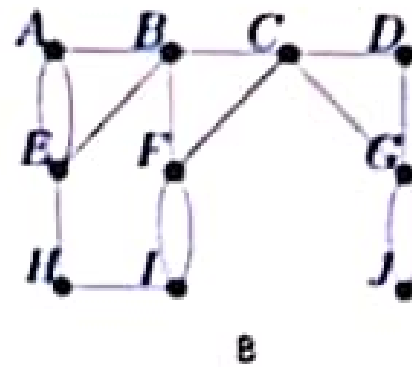
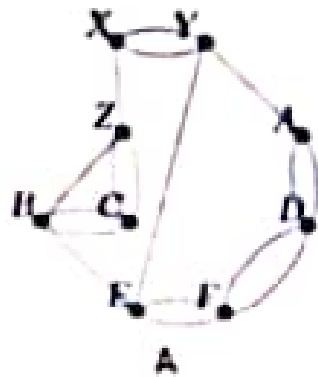


C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☐ All are isomorphic
- ☐ None of the above

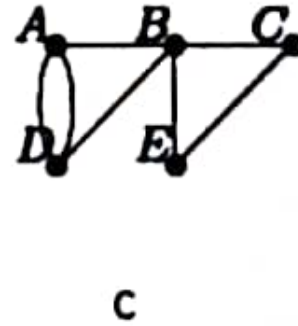
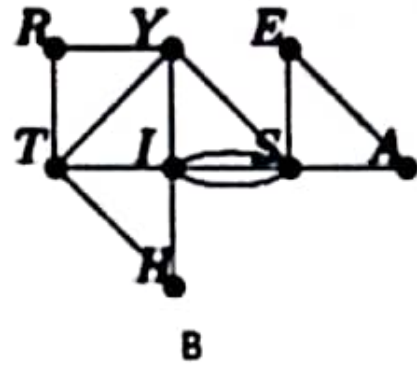
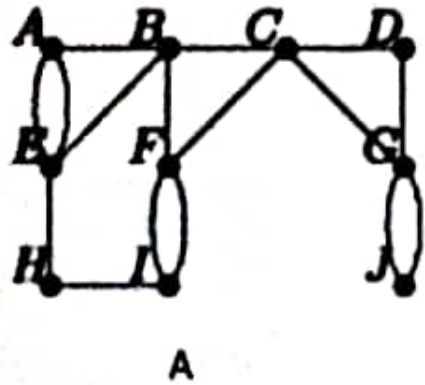
Which of these do not have Euler Circuits?



Select one

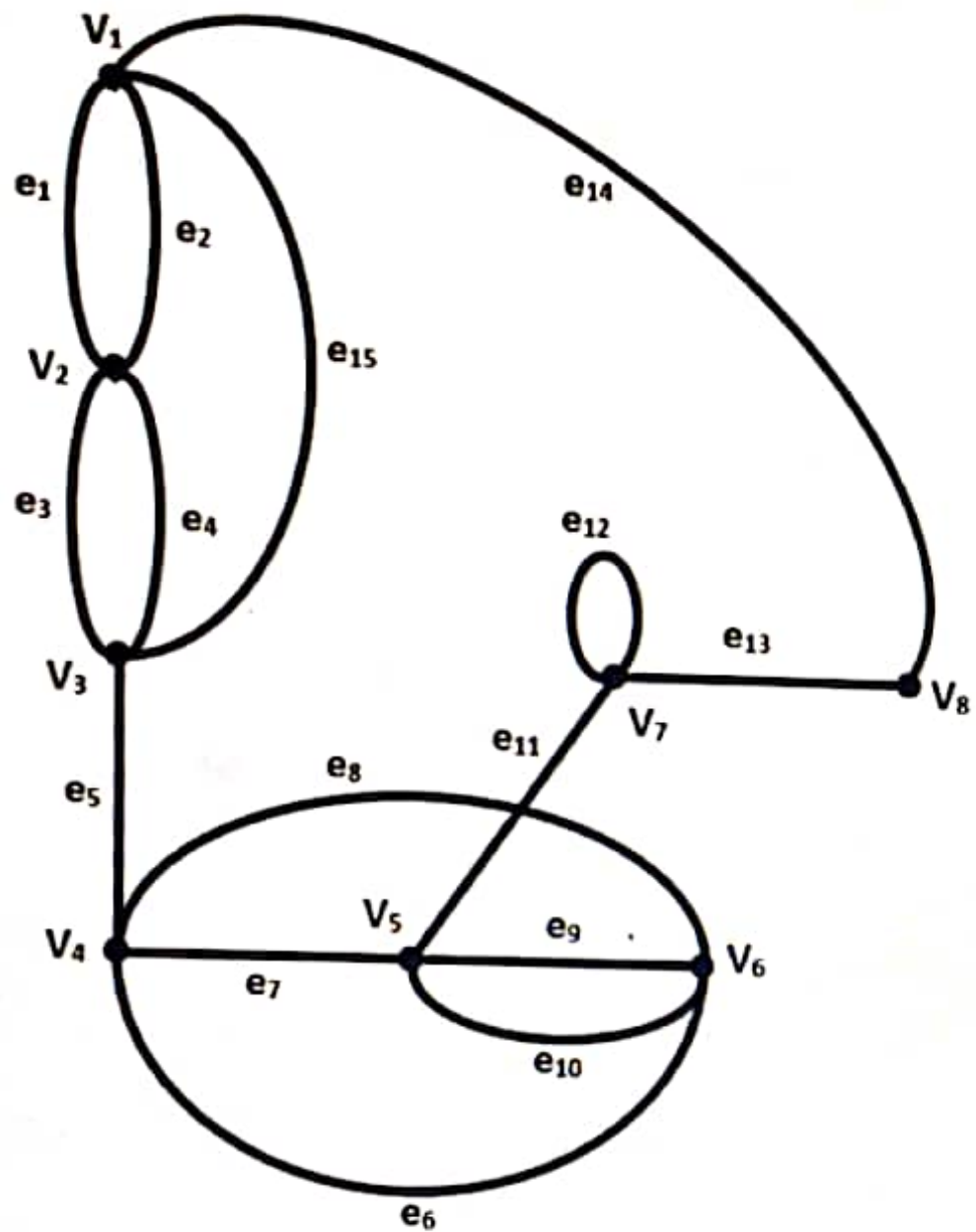
- ☐ None of the above
- ☐ C only
- ☐ A only
- ☐ B only
- ☐ All graphs

Which of these have Euler Circuits?



Select one:

- ☐ A only
- ☐ B only
- ☐ C only
- ☐ All graphs
- ☐ None of the above



Select the correct Hamilton circuit.

Select the correct Hamilton path.



Question 5

Not answered

Marked out of

1.00 question

Solve the equation $A = B$ when.

$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 1 & 2 \\ 0 & 2 & 3 \end{bmatrix}.$$

Select one:

- ☐ $x = -1, y = 1$
- ☐ $x = -2, y = -2$
- ☒ $x = 1, y = -1$
- ☐ $x = 2, y = -2$
- ☐ None of the above



Question 2

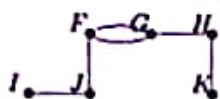
Not answered

0 out of 1

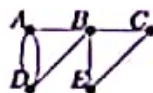
Flag question

Which of these graphs have Euler Paths?

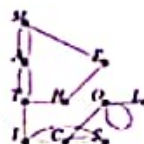
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

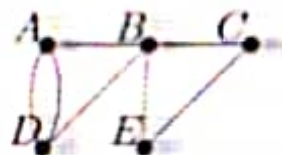
- ☐ A and B only
- ☒ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above

Question 2
 Not yet answered
 Marked out of 1.00
 Flag question

Which of these graphs have Euler Paths?
 (Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☒ All graphs
- ☐ None of the above

Question 01 (20 marks)

- (i) Find an equation of the tangent line to the curve $y = x^3 + 2x$ at the point $(2, 12)$ **(4 marks)**

- (ii) Find the length of the subtending arc when $\theta = 60^\circ$ and $r = 5$. **(4 marks)**

- (iii) Find the indefinite integral $\int (x^2 + 6x - 2) dx$. **(4 marks)**

Which of these have Hamiltonian Circuits?



A



B



C

Select one:

- ☐ A only
- ☐ A and B only
- ☐ C only
- ☐ A and C only
- ☐ None of the above



Question 8

Not yet answered

Marked out of

1.00 question

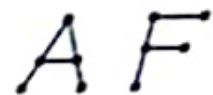
Which of the following pairs are non isomorphic?



A



B



C

Select one:

- ☐ A only
- ☐ B only
- ☐ C only
- ☐ A and C only
- ☐ None of the above

Question 8

Not yet answered

Marked out of 1.00

Flag question

Which of the following pairs are isomorphic?



A



B



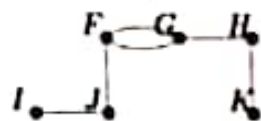
C

Select one:

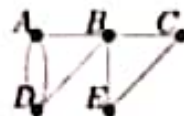
- ☐ A and B only
- ☐ A and C only
- ☐ B and C only
- ☐ All pairs
- ☐ None of the above

Which of these graphs have Euler Paths?

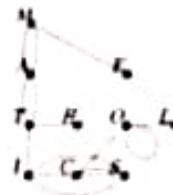
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above



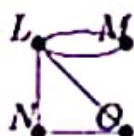
Question 3

Not answered

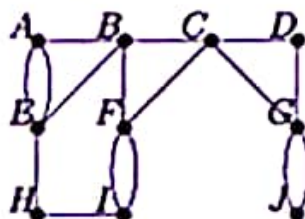
Marked out of

1.00 question

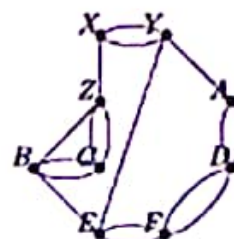
Which of these have Hamiltonian Circuits?



A



B



C

Select one:

- ☐ A only
- ☐ A and B only
- ☒ C only
- ☐ A and C only
- ☐ None of the above



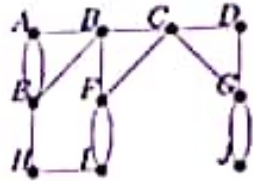
Question 1

Not answered

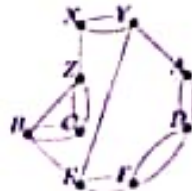
0 out of 1

1 question

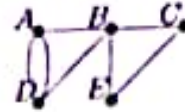
Which of these do not have Euler Circuits?



A



B



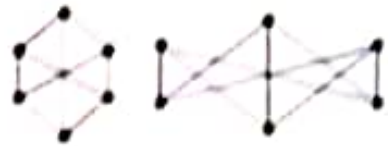
C

Select one:

- ☐ A only
- ☐ B only
- ☐ C only
- ☒ All graphs
- ☐ None of the above

Next page

Which of the following pairs are isomorphic?



A



B

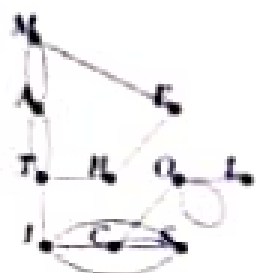


C

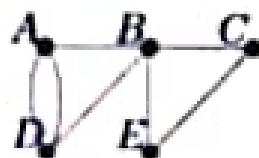
Select one:

- ☐ A and B only
- ☐ A and C Only
- ☐ B and C only
- ☐ All are isomorphic
- ☐ None of the above

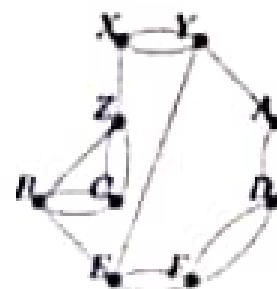
Which of these graphs have Hamiltonian Paths?



A



B



C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above

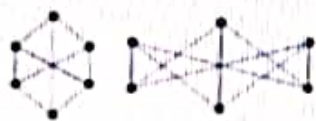
Question 8

Not yet answered

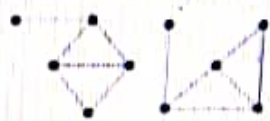
Marked out of 1.00

Flag question

Which of the following pairs are isomorphic?



A



B



C

Select one:

- ☐ A and B only
- ☐ A and C Only
- ☐ B and C only
- ☐ All are isomorphic
- ☐ None of the above

Next page

Which of the following pairs are isomorphic?



A



B

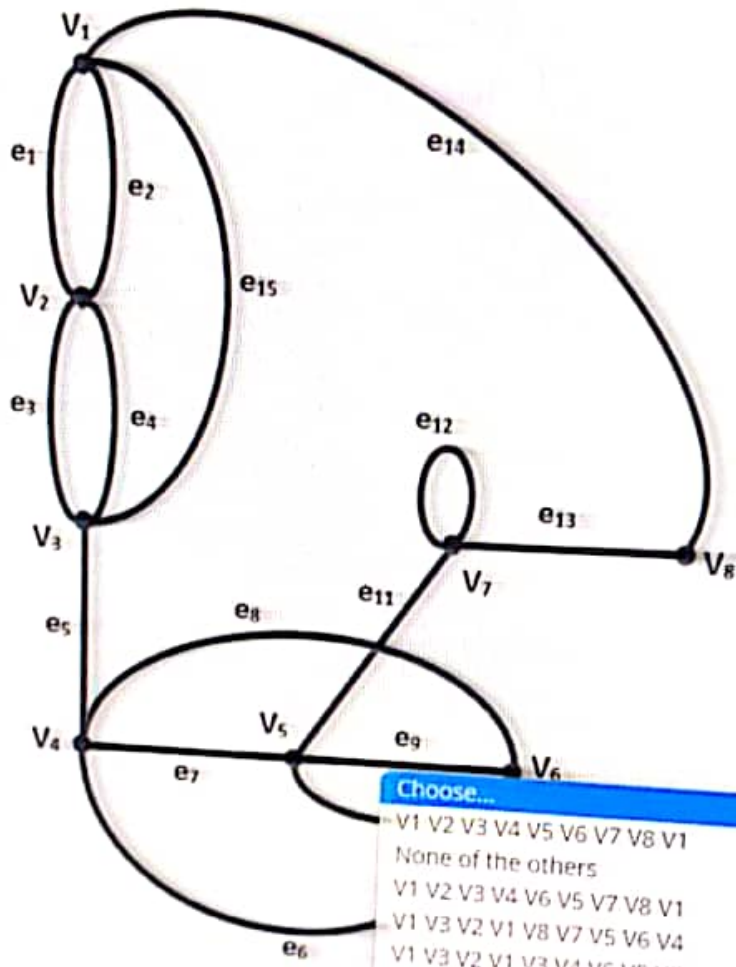


C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☒ All are isomorphic
- ☐ None of the above

For the given graph.



Select the correct Hamilton circuit.

Select the correct Hamilton path.

Choose...

Which of the following pairs are non isomorphic?



A



B



C

Select one:

- ☐ A only
- ☐ B only
- ☐ C only
- ☐ All are non isomorphic
- ☐ None of the above



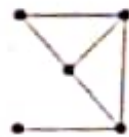
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Which of the following pair of graphs are isomorphic?



A



B



C

Select one:

- ☐ A only
- ☐ B only
- ☐ A and B only
- ☐ All pairs are isomorphic
- ☐ None of the above

8

answered

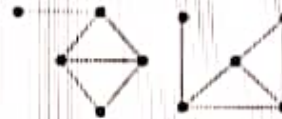
out of

question

Which of the following pairs are isomorphic?



A



B



C

Select one:

- ☐ A and B only
- ☐ A and C only
- ☐ B and C only
- ☐ All pairs
- ☐ None of the above

Solve the equation $A = 2B$ when,

$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 1/2 & 1 \\ 0 & 1 & 3/2 \end{bmatrix}.$$

Select one:

- ☐ $x = -1, y = 1$
- ☐ $x = -2, y = -2$
- ☐ $x = 1, y = -1$
- ☐ $x = 2, y = 2$
- ☐ None of the above



Question 7

Not yet answered

Marked out of
1.00

Flag question

Find the product of the following 2 matrices.

$$\begin{bmatrix} 0 & 5 \\ -3 & 1 \\ -5 & 1 \end{bmatrix} \begin{bmatrix} -4 & 4 \\ -2 & -4 \end{bmatrix}$$

Select one:

☐ $\begin{bmatrix} -10 & -20 \\ 10 & -16 \\ 18 & -24 \end{bmatrix}$

☐ $\begin{bmatrix} -15 & 5 \\ 18 & -6 \\ 0 & 0 \end{bmatrix}$

☐ $\begin{bmatrix} -8 & 14 \\ 33 & 6 \\ -24 & -60 \end{bmatrix}$

☐ $\begin{bmatrix} -8 & 14 \\ 33 & 6 \\ -24 & 6 \end{bmatrix}$

☐ None of the above



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5

answered

out of

question

Solve the equation $A = B$ when,

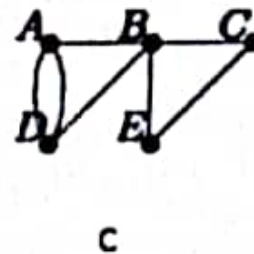
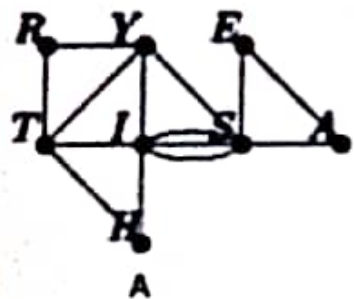
$$A = \begin{bmatrix} x & 1 & 2 \\ 0 & x^2 - y & 3 \end{bmatrix} \text{ and } B = \begin{bmatrix} 2 & 1 & 2 \\ 0 & 2 & 3 \end{bmatrix}.$$

Select one:

- ☐ $x = -1, y = 1$
- ☐ $x = -2, y = -2$
- ☐ $x = 1, y = -1$
- ☐ $x = 2, y = -2$
- ☐ None of the above

Which of these graphs **do not** have Euler Paths?

(Hint: A theorem for Euler paths can be used.)



Select one:

- ☐ A and B Only
- ☐ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above

Question 2

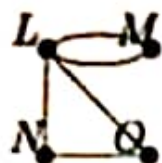
Not yet answered

Marked out of
1.00

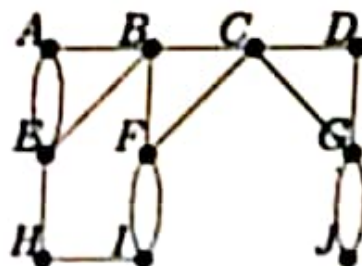
Flag question

Which of these have Euler Paths?

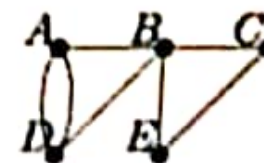
(Hint: A theorem for Euler paths can be used.)



A



B



C

Select one:

- ☐ A and B only
- ☐ B and C only
- ☐ A and C only
- ☐ All graphs
- ☐ None of the above

Find the following product.

$$\begin{bmatrix} 0 & 2 \\ -2 & -5 \end{bmatrix} \begin{bmatrix} 6 & -6 \\ 3 & 0 \end{bmatrix}$$

Select one:

☐ $\begin{bmatrix} -30 & 24 \\ 15 & -12 \end{bmatrix}$

☐ $\begin{bmatrix} 6 & 0 \\ -27 & 12 \end{bmatrix}$

☐ $\begin{bmatrix} -5 & -10 \\ 8 & 13 \end{bmatrix}$

☐ $\begin{bmatrix} -14 & -3 \\ -19 & 22 \end{bmatrix}$

☐ None of the above