

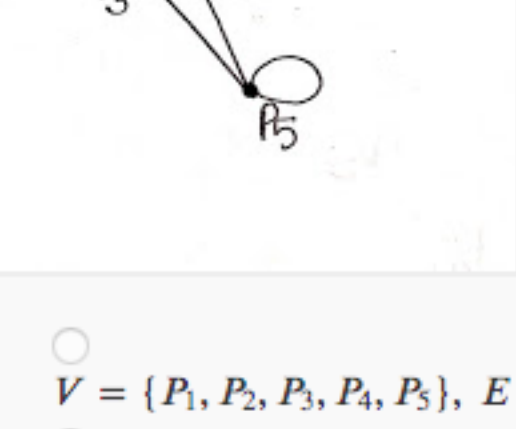
Unit 7 - Week 6

Course outline
How to access the portal?
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
<input type="radio"/> Various type of Graphs-I <input type="radio"/> Various types of Graphs-II <input type="radio"/> Paths and Connectivity <input type="radio"/> Subgraphs and Traversable Multigraphs <input type="radio"/> Undirected and Directed Graphs <input checked="" type="radio"/> Quiz : Assessment-6
Week 7
Week 8
Week 9
Week 10
Week 11
Week 12
Download Videos
Feedback Link
Text Transcripts

Assessment-6

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. **Due on 2019-09-11, 23:59 IST.**

1) The multigraph as shown in the figure below, can be formally described as 1 point



- $V = \{P_1, P_2, P_3, P_4, P_5\}, E = \{(P_1, P_2), (P_1, P_2), (P_1, P_3), (P_1, P_4), (P_2, P_4), (P_3, P_4), (P_4, P_5), (P_5, P_5)\}$
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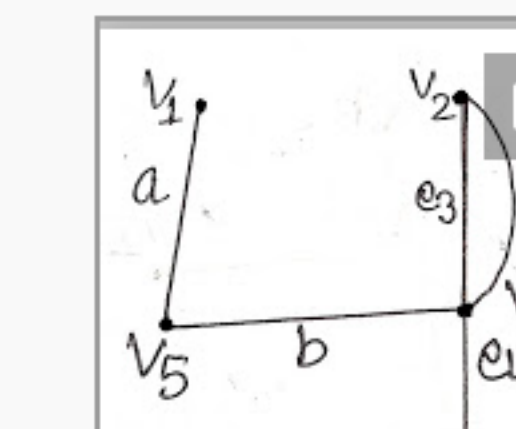
No, the answer is incorrect. Score: 0
Accepted Answers: $V = \{P_1, P_2, P_3, P_4, P_5\}, E = \{(P_1, P_2), (P_1, P_2), (P_1, P_3), (P_1, P_4), (P_2, P_4), (P_3, P_4), (P_4, P_5), (P_5, P_5)\}$

2) Consider the multigraph G where $V(G) = \{A, B, C, D\}$ and $E(G) = \{(A, B), (A, D), (B, B), (B, C), (C, A), (C, B), (D, B), (D, D)\}$. Then the sum of the degrees of the vertices of G is equal to 1 point

- 8
- 16
- 4
- 12

No, the answer is incorrect. Score: 0
Accepted Answers: 16

3) The ring sum of the graphs G and H as shown below, is given by 1 point



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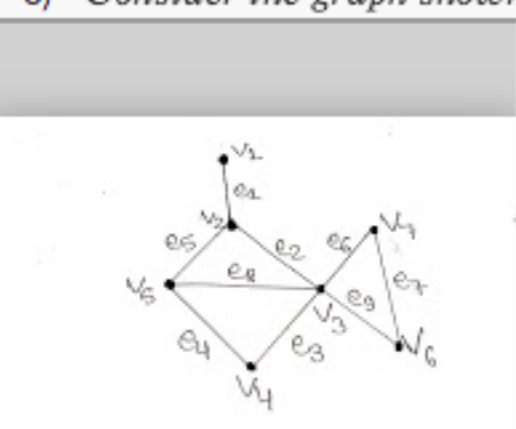
No, the answer is incorrect. Score: 0
Accepted Answers:

4) Which of the following graphs is regular of degree 3 with 6 vertices? 1 point

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No, the answer is incorrect. Score: 0
Accepted Answers:

5) Consider the graph shown in the figure below; 1 point



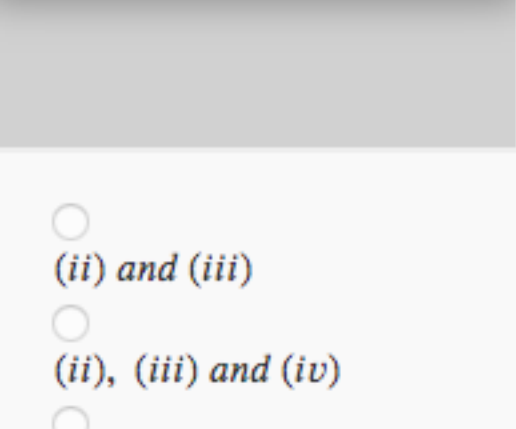
Then which of the following sequences is a simple path, trail or cycle?

- (i) $v_1, e_1, v_2, e_2, v_3, e_3, v_4, e_4, v_5, e_5, v_6$
- (ii) $v_2, e_2, v_3, e_3, v_4, e_4, v_5, e_5, v_6, v_2$
- (iii) $v_1, e_1, v_2, e_2, v_3, e_3, v_4, e_4, v_5, e_5, v_6, v_1$

- (i) simple path (ii) cycle (iii) trail
- (i) trail (ii) simple path (iii) trail
- (i) trail (ii) cycle (iii) simple path
- (i) simple path (ii) trail (iii) cycle

No, the answer is incorrect. Score: 0
Accepted Answers: (i) trail (ii) cycle (iii) simple path

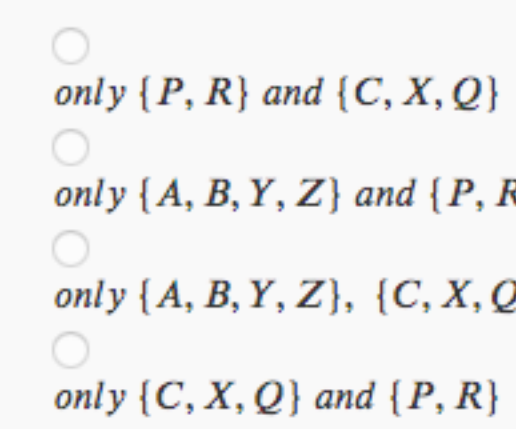
6) Which of the following graph(s) is/are connected? 1 point



- (ii) and (iii)
- (ii), (iii) and (iv)
- (i), (ii) and (iv)
- (i), (ii) and (iii)

No, the answer is incorrect. Score: 0
Accepted Answers: (ii) and (iii)

7) Consider the graph G as shown in the figure below 1 point

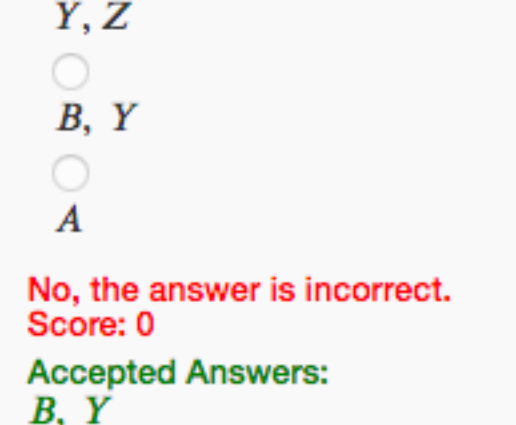


Then connected component(s) of G is/are :

- only {P, R} and {C, X, Q}
- only {A, B, Y, Z} and {P, R}
- only {A, B, Y, Z}, {C, X, Q} and {P, R}
- only {C, X, Q} and {P, R}

No, the answer is incorrect. Score: 0
Accepted Answers: only {A, B, Y, Z}, {C, X, Q} and {P, R}

8) Let G be the graph as shown in the figure below; 1 point

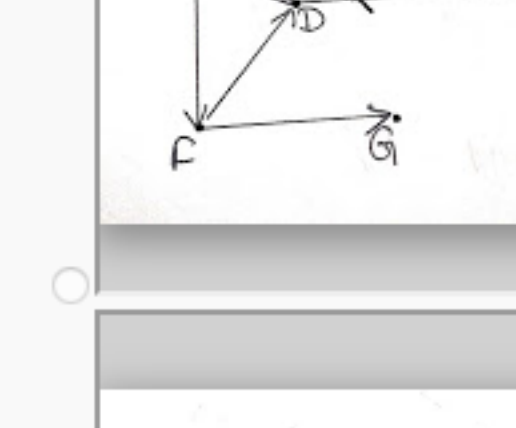


Then the cut point(s) of G is/are;

- B
- Y, Z
- B, Y
- A

No, the answer is incorrect. Score: 0
Accepted Answers: B, Y

9) Consider the digraph G(V, E) as shown in the figure below; 1 point

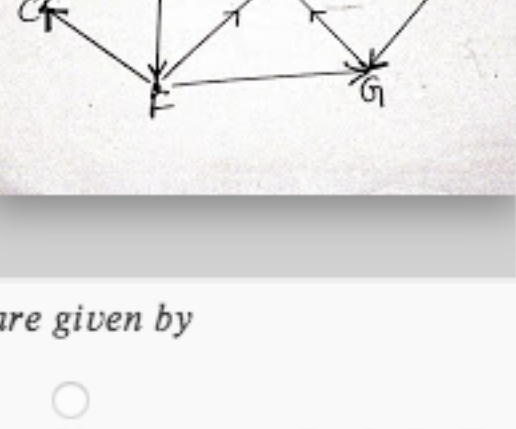


Then the diagram of the subgraph of G(V, E) generated by $V' = \{A, B, D, E, F\}$ is given by

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No, the answer is incorrect. Score: 0
Accepted Answers:

10) The indegree and the outdegree of each vertex in the graph shown below : 1 point



are given by

- Vertex A B C D E F G
Indegree 0 2 2 4 2 1 1
outdegree 4 1 0 0 3 3 1
- Vertex A B C D E F G
Indegree 0 2 2 4 1 1 2
outdegree 4 1 0 0 3 3 1
- Vertex A B C D E F G
Indegree 0 2 2 4 1 1 2
outdegree 4 1 0 0 2 3 2
- Vertex A B C D E F G
Indegree 0 2 2 4 2 0 2
outdegree 4 1 0 0 2 3 2

No, the answer is incorrect. Score: 0
Accepted Answers: Vertex A B C D E F G
Indegree 0 2 2 4 1 1 2
outdegree 4 1 0 0 3 3 1